THE BUILDER

INCORPORATING

"ARCHITECTURE" AND "THE BRITISH ARCHITECT"

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TWO GREAT DOMESTIC ARCHITECTS

WE have recently had reminders of two great men of a past generation, both of whom will be remembered chiefly for their decisive influence upon domestic architecture in England. When it is remembered that it is in the field of domestic architecture that this country stands supreme, the occasion seems specially deserving of comment.

Norman Shaw, whose Life by Sir Reginald Blomfield has just been published, has received many tributes, and well-deserved ones at that; and although Shaw was probably the greater figure of the two to whom we propose to refer, the fact that his influence is generally recognised and his works well known to even casual architectural students makes it possible to comment upon his work with comparative brevity, without risk of losing a sense of proportion. The work and teaching of the other architect, the late C. F. A. Voysey, whose passing was regretted by all who remember not only his talent but his charming and understanding character, had a great influence upon domestic architecture, not only in this country but abroad.

Shaw's mansions piled up magnificently upon a broad canvas, and romanticism of the scale on which he practised it is bound to have an architectural significance when handled with the true insight of the builder. Shaw did what many of the Victorians failed to do, and that was to eradicate pomposity without loss of dignity, and he infused a new delight into the diverse needs of a country mansion. And it was not only that he did this himself, but he inspired others towards the same approach. His own pupils would be his natural followers, and little need be said about how they shaped, but in various country centres there are traces of other talented, if lesser figures, who obviously looked to him as to a model. Such names as Paxton Watson, of Farnham, and Watson Fothergill of Nottingham, come readily to mind among this cult of romantics. Shaw did in fact ring the knell upon the quality of "stodginess" in large-scale domestic building.

Voysey, on the contrary, by choice or circumstance found his main field of activity in a smaller scale of building, and we think more of the country cottage than the gentleman's mansion when considering his work. He built many large country houses which were all inspired by the humbler elements of home-building, and he was at home with the building of all classes of houses that had a setting of fields, woods and hills. It was his ambition and fortune to be a modernist of his times, and he was not content to produce display, unless it arrived naturally out of the task in hand. He regarded the house as essentially a place to live happily within, and there is, indeed, no house more favourably disposed towards happy living than a Voysey house, even when judged by the high standards we observe to-day. Voysey never allowed the traditions of manners and appearances to stand in the way of convenient planning, but to say that he was uninfluenced by tradition would be entirely incorrect, for no man understood the real significance of the farmhouse and country cottage more completely than did he. He did not attempt to take the outer shape and form of a traditional cottage and contort within that imposed restriction accommodation which pressed for other treatment, but he did appreciate the graceful naturalness with which the country builder covered in the simple requirements of the peasant occupier, and taking the same honest skill for his guide he contrived to make his houses not only feel comfortable from within but look comfortable from without, which is surely the proper goal for the domestic architect of all times and all places.

There were, of course, little mannerisms in his work which the superficially-minded remember most clearly, but which mean very little in themselves. These mannerisms can be easily criticised, and often a case can be made out for a charge of inconsistency, but what architect with any real individuality is there who could be sure of an acquittal on the same count?

Voysey's influence upon his contemporaries was even more marked than his actual personal achievements, and though that influence may not now rest upon the surface, a very great part of the fluency with which the domestic planner now approaches his task may be put down with certainty to that influence. So it is that all good influences work, not by the creation of a team of imitators but by that of a company of men who have learned a new concept of wisdom.

But the main thing which both these men did was to infuse into their work something of the intangible charm that is found in those country places we now find so necessary to preserve. Both realised that life at home flowered in warm feelings, and that however much cold efficiency could contribute to the daily life of occupational hours, there was no doubt that it needed much more than this quality to make a home. That is perhaps the great lesson which the modernist must take to heart before he can claim to have added anything to the development of the English house. The clever man is an intolerable bore by the fireside unless he has kept some warmth of human feeling in his make-up. The clever house, too, is a weariness unless it has about it some characteristic taste and comfort to lend enjoyment to its modern conveniences.

These qualities cannot be "taught" but only absorbed. The student of to-day must be encouraged to look with some reverence upon the works of men like Shaw and Voysey, and to realise that there was a quality about the Victorians and Edwardians for which we have been vainly groping for a generation.

DURHAM CATHEDRAL.

From a Drawing by A. C. FARE, R.W.A.

NOTES AND NEWS

Consultative Panel on Physical Planning.

THE Ministry of Works and Buildings announced on Tuesday the names of the Consultative Panel on Physical Planning as follows:—

L. PATRICK ABERCROMBIE, F.R.I.B.A., Professor of Town Planning, London University, Chairman of Council for the Preservation of Rural England, Member of Royal Commission on Distribution of Industrial Population.

W. H. ANSELL, M.C., P.R.I.B.A., President of the R.I.B.A.

LORD BALFOUR OF BURLEIGH, Chairman of the 1940 Council.

SIR MONTAGUE BARLOW, Bt., K.B.E., LL.D., Chairman of the Royal Commission on Industrial Population.

THE RT. HON. SIR WALTER CITRINE, K.B.E., General Secretary, T.U.C.

SIR GEORGE ETHERTON, O.B.E., Clerk of the Lancashire County Council, Chairman of the Society of Clerks of County Councils.

W. H. GAUNT, C.B.E., Member of the Hertfordshire County Council, Advisory Council and Town Planning Institute.

T. W. HAWARD, Past President of the Land Agents' Society, Member of the Town Planning Institute.

MRS. LIONEL HICHENS, Member of the Royal Commission on Distribution of Industrial Population.

F. R. HIORNS, F.R.I.B.A., Chief Architect to London County Council.

L. H. KEAY, O.B.E., F.R.I.B.A., City Architect and Director of Housing, Liverpool.

T. ALWYN LLOYD, J.P., F.R.I.B.A., Past-President Town Planning Institute, Member of Executive Committee of the Council for the Preservation of Rural Wales.

SIR MILES MITCHELL, J.P., Alderman, City of Manchester.

RICHARD L. MOON, Clerk of the Gloucestershire County Council, Member of the Town Planning Institute.

F. J. OSBORN, Hon. Secretary to the Garden Cities and Town Planning Assn.

D. A. RADLEY, LL.B., Town Clerk, Leeds, President of the Town Planning Institute.

L. DUDLEY STAMP, D.Sc., Director of the Land Utilisation Survey, Professor of Economic Geography, London School of Economics.

G. W. THOMSON, President of the National Federation of Professional Workers, Member of the General Council, T.U.C., and of Royal Commission on Distribution of Industrial Population.

SIR CECIL M. WEIR, K.B.E., M.C., President of the Glasgow Chamber of Commerce, Member of the Scottish Development Council.

SIR WM. E. WHYTE, O.B.E., Hon. Chairman Town Planning Institute, Scottish Branch, Member of the Royal Commission on Distribution of Industrial Population, Chairman of the Scottish Advisory Committee Housing Act, 1931.

T. G. WILSON, Director of the Highland and Islands Agricultural Society, Member of the Board of Governors, West of Scotland Agricultural College, Chairman of the Scottish Milk Marketing Board.

Planning the New London.

THE London County Council and the City Corporation have been asked by the Minister of Works and Buildings to prepare plans for the reconstruction of London. Already there have been informal conversations between officers of the Council and the Corporation and the Ministries of Health, Transport and Works.

In a letter to the Chairman of the Council, Lord Reith says: "I understand that in order to show what road connections will be desirable the Ministry of Transport will be ready to advise the Council as to the future lines of trunk roads round the London boundary. When a sufficient indication can be given of a scheme for the inner areas, I would arrange for the extension of the work in the outer areas."

The Civil Defence and General Purposes Committee, in a report to the Council, states: "We feel sure that the Council will welcome the proposal of the Minister, and readily agree to the preparation of the suggested provisional plan."

The preparation of the plan will be undertaken by the Architect to the Council and his staff, but, in view of the great importance of the matter, the committee recommend the appointment of Professor Patrick Abercrombie, Professor of Town Planning at London University, as consultant, at a fee of 1,000 guineas.

The committee hopes that the plan will be ready by the end of the summer.

Building Licences.

THE Ministry of Works and Buildings call attention to an important amendment in Regulation 56a of the Defence (General) Regulations which concerns licences for building operations. The amendment comes into force on April 14, and the chief changes may be summarised as follows:

(*a*) On and after April 14, 1941, no building operation estimated to cost more than £100 may be commenced except by licence issued by the Ministry of Works and Buildings, or, in the case of local authorities and public utilities, by an authorisation issued by the appropriate Government Department. Under the old regulations works under £500 were exempt from licence or authorisation; under the new order only works under £100 are exempt. Works carried out by, or at the expense (in whole or in part) of, a Government Department, or by a local authority under the Civil Defence Acts, 1937 and 1939, are, however, excluded from the operation of the Order, since they are adequately controlled through the Departments.

(*b*) In the event of more than one building operation to the same building being undertaken within any period of 12 months, a licence or authorisation is obligatory where the aggregate cost of these operations will exceed £100. In estimating the amount to be spent on the operation, the cost of decorative work and also of works to provide water, light, heating and other services, must be included.

IN 1916.

EXTRACT FROM *The Builder*, APRIL 7.

"The country around Salonika is rich in archæological remains, and has never been properly explored. The Allied armies decided to take steps to preserve the relics that they found for the benefit of the Greek Government, to whom such discoveries naturally belong."—Extract from Notes by Mr. G. Ward Price.

PRINCIPAL CONTENTS

ARTICLES	Page
LEADING ARTICLE: Two Great Domestic Architects	355
CORRESPONDENCE	357
WAR-TIME BUILDING PRACTICE.—No. 48. By R. Cotterell Butler, A.R.I.B.A.	359
THE WAR DAMAGE ACT.—I. By W. T. Creswell, K.C.	367
NATIONAL PLANNING: PROBLEMS OF DECENTRALISATION; PLANNING PRINCIPLES ...	368
CONSTRUCTION OF AERODROMES	369
NEWS OF FORTHCOMING CONSTRUCTION ... 370, 371 and	375
WAGES, PRICES OF MATERIALS ...	372-3
ILLUSTRATIONS	
MEIFOD COUNCIL SCHOOL, MONTGOMERY. Mr. H. Carr, F.R.I.B.A., County Architect ...	361-2
R.I.B.A. INTERMEDIATE EXAMINATION. PARTS OF TESTIMONIES OF STUDY. By Messrs. Kenneth A. Morgan; H. R. S. Ferin; and R. K. Fowler	363-6

CORRESPONDENCE

[While we are glad to publish letters on professional and other matters of interest to our readers, it must be understood that we do not necessarily endorse the remarks of correspondents, who will oblige us if they will express their views as briefly as possible.]

Proposal to Build an Experimental Town.

TO THE EDITOR OF *The Builder*.

SIR,—The Government should build an experimental town *now* on a freehold site purchased outright by the State, and designed on modern town-planning principles—the size of the town to be statutory, and not to exceed, say, 100,000 inhabitants. We are spending over ten million pounds per day on the war, so for less than one week's expenditure we could plan and build this ideal town and show what can be done. From this experiment many useful lessons could be learnt for future guidance, and the work accomplished would be one of the finest investments in the world. It would also remain as a valuable inspiration for many such towns required in the future.

It would take at least twelve months to make the survey of the site, approve sketch plans, and make working drawings, also prepare quantities and arrange contracts. This preliminary work is essential, for thought and design there must be, otherwise the material is either misused or entirely wasted. An air survey would be useful. Once the layout was agreed upon, fully detailed plans and sections would be drawn out in close collaboration with architects and engineers, then contracts placed with building firms. A full staff of quantity surveyors would control materials and prices. Choice of materials, with laboratory tests if necessary, would remain with the architects, for many a building project has been ruined by badly selected bricks, timber, paint, etc. Sanitary and other fittings would be the best of their respective kinds, and British manufacturers can supply these in first-class design and quality if paid a fair price. A large-scale model would show all the contours, natural features, and buildings of archæological interest to be preserved. Such a scheme might take four or five years to build, and perhaps longer finally to complete, but would remain for ever under architectural control, and all new buildings would conform to the general plan.

There must be no standardisation in design, but there can be no objection to standardising bricks, tiles, drain-pipes, and so forth. When it comes to style in architecture, locality must receive the first consideration. Is the district one where stone is used, or is brick the local material? Perhaps there is a tradition for fine half-timber work, or beautifully thatched roofs which seem to fit into the landscape. These points can only be decided on site, taking into account all the factors involved. In fact, every part of the country will require different treatment if traditions are to be preserved. This will demand consultation with the local panel of architects, and there must be no dictation by Whitehall, but rather every consideration given to those who have spent all their lives in that particular area. Only thus can we build to a comprehensive plan which will satisfy all. The more discussion there is the better, for it is only by the clash of ideas that any firm policy can be agreed upon. This war is being fought for democracy and freedom, so let there be free association and freedom of thought everywhere. A rigid system of standardi-

sation would be fatal to any ordered progress.

Art knows no frontiers, and there is great hope in the universal influence of art and architecture. There can be no true dignity without the inspiring effect of fine buildings and architecture. Building and architecture are essentially the arts of peace and cannot flourish in an atmosphere of hatred and war, and any future scheme of reconstruction cannot simply apply to our land alone. This idea must develop into a world movement. When this war is over, I suggest that it would be advantageous to exchange towns and cities with other nations. There is considerable precedent for this. Washington in America was designed by a French architect, while Canberra in Australia was the result of an international competition won by a Chicago architect. The new Delhi was designed by Sir Edwin Lutyens and Sir Herbert Baker. French architects also designed many of the prominent buildings in St. Petersburg (now Leningrad). Therefore let us lead the way forward to a great period of rebuilding and reconstruction such as has never been seen before. Let the golden age of building and architecture begin. With imagination and determination these schemes can take practical shape, if we but have the faith which is the substance of things hoped for, the evidence of things not seen, for then there can be no such word as "impossible."

J. E. Rhind, A.R.I.B.A.,
Weybourne, Dipl.Arch.(Aber.).
Near Farnham, Surrey.

Domestic Indoor Air-Raid Shelters.

To the Editor of *The Builder*.

Sir,—I read Mr. J. W. Lister's reply to my letter *re* the above [*The Builder*, March 7] with mixed feelings, firstly, because I wrote the letter thinking I was expressing the feelings of the large majority of people concerned with the providing of air-raid shelters and I did not expect to start a controversy; and secondly—I say this without prejudice—because Mr. Lister is the first person I have heard of who is willing to find excuses for the new shelters.

In the first paragraph of his letter Mr. Lister admits that the points raised in my letter are in fact disabilities, but he goes on to say that doubtless the designer had foreseen all this! If this is so, then it is a pity he (or she) did not incorporate the necessary counter-measures in the scheme; if this had been done then my letter of February 28 would never have been written.

Personally, I cannot see what measures can be adopted to bring this shelter up to the recognised standards. For instance, Mr. Lister tells us that "there is no doubt that the designer has made provision against the damage of flying glass and splinters; this is not a difficult proposition." Now from whatever angle I consider a piece of steel mesh I fail to see how it can be considered proof against a piece of cotton-wool, let alone bomb splinters.

I have been informed by knowledgeable people that lateral protection is provided by the walls of the room. I would be happy to agree with this assumption if I could be convinced that any single room in the average domestic dwelling was bounded on all sides by 13½-in. walls.

Further, Mr. Lister says that doubtless the designer has arranged a device for withdrawing the beds to facilitate bed-making! If he has, I wonder if he has tried manœuvring it in the living-room of the aforementioned dwelling (average dimensions, say, 12 ft. by 10 ft.). This means a space of 12 ft. by 4 ft. (minimum) being reserved for the shelter, leaving a space of 12 ft. by 6 ft. for the family to live in.

Again, if, as Mr. Lister suggests, the height of the shelter should be raised to enable the users to sit up comfortably, then the idea of using it as a table becomes void. This can be proved by experiment. (Don't forget to allow for the thickness of the withdrawing device and mattress when taking the overall height required.)

With regard to the asphyxiation question, Mr. Lister's suggested remedy fails to solve the problem, for if we cut a hole in a wall large enough to admit the passage of a body, we immediately frustrate the object of placing the shelter near the walls, which is, I take it, to afford a modicum of lateral protection. Moreover, I will hazard a guess that Mr. Lister has not yet had the unhappy experience of a house collapsing about his ears!

To quote another passage: "The shelter would obviously not be placed in a room where danger of collapse was possible, nor would it be placed in a basement where there was danger of flooding."

If the occupier of a house or his advisers can find a room which qualifies for the above, then he has the Utopian shelter without any additional contrivances.

Lastly, the suggestion that salvaged timber should be used in the construction as an alternative to steel merely adds yet another danger to an already formidable list, namely, fire. In any case, the shelter was designed for steel and is now in production.

M. H. Reeves.

37a, The Chase, S.W.4.

Upkeep of Property.

To the Editor of *The Builder*.

Sir,—I am pleased to see that in the city of Hull a responsible civic leader has protested against the cuts in the estimates for painting work.

Of all war-time economies the omission of regular painting by local authorities is least justified, for it is the cheapest form of insurance of public property against rapid deterioration and one of the greatest savers of timber.

If civic buildings are allowed to go shabby the individual owner or occupier cannot be blamed for following the example of authority. But in one respect the householder has even less excuse than the local authority for neglect to paint; at a pinch he can wield his own brush, thereby making no call upon labour which may be required for other war effort.

T. Simpson Pedler,
General Secretary,
National Federation of Property Owners and Ratepayers.
Westminster, S.W.1.

[Other Correspondence is unavoidably held over.—Ed.]

COMING EVENTS

Tuesday, April 15. Housing Centre.—Luncheon: Mrs. Flora Stephenson on "Community Centres." 1 p.m.

Saturday, April 19. Committee of Technicians in the Building Industry.—Discussion on "The Politics of A.R.P.," to be opened by Mr. J. S. Scott. 9, Great Newport Street, W.C.2. 2.30 p.m.

Tuesday, April 22. Housing Centre.—Luncheon: Dr. W. A. Robson on "Relation of London Government to Post-War Reconstruction." 1 p.m.

I.A.A.S. LUNCHEON

On Thursday, April 3, members and friends of the Incorporated Association of Architects and Surveyors assembled at Claridge's Hotel, Brook-street, W.1, for a luncheon which this year replaced the annual dinner. Mr. V. S. Peel (President) occupied the chair.

The toast of "The King" having been honoured, Mr. R. Browne (Chairman of the London and Home Counties Branch) proposed the health of His Majesty's Government.

The Rt. Hon. Arthur Greenwood (Minister without Portfolio), in reply, having paid tribute to the Prime Minister—"the living embodiment of the grit, courage, endurance, energy and bulldog tenacity of the British people"—said when victory had been won we should be faced with the duties and responsibilities of the peace, and he (the speaker) regarded it as his particular task to organise and promote plans designed to make this country a better, worthier and happier homeland for the nation, who by their splendid example and exertions were saving freedom for themselves and for the world. After the war the restoration of towns and cities which had suffered from the enemy's bombardment would be a gigantic task: it would be a question of rebuilding wrecked homes, charred churches, shattered schools, damaged hospitals and other public buildings; and for this we must plan on a regional as well as on a town basis. Our battle-scarred centres must be restored and recreated on finer and lovelier lines.

Major-General K. C. Appleyard, C.B.E., etc. (of the Ministry of Works and Buildings), proposed the toast of "The Association," first expressing the regret of Lord Reith for inability to be present. At some time in 1937 he (the speaker) had begun to study the unfinished work of science, and anyone studying that subject could dream of the work of physicists, chemists and engineers, who were going one day to provide for builders many wonderful materials of which nothing was known to-day, such as glasses susceptible to bending, plastics, of which now we were only at the beginnings, new paints and all kinds of other things. We might think of the day when we should have a cold light: the firefly emitted such a light far more efficient than anything man could produce to-day. Or we might be able to have our houses and roadways flooded with natural light at a fraction of to-day's cost of our present artificial light. We might wonder whether the day would ever come when the airman flying to Newcastle would no longer have to fly round that city to avoid the pall of smoke hanging over it, but would be able to ride over it in safety because there would be no smoke. Such had been his (the speaker's) dreams, but he had been able to carry out one experiment in industrial planning on a large scale which had been not only functionally efficient but, he thought, rather beautiful, where working-places were clean and light, and where industrial life was as pleasant as it could now be made. To-day his task under Lord Reith was to repair buildings as they were damaged in order that people might have shelter and our productive effort not be seriously disturbed. Lord Reith had undertaken no small task, but in the Ministry of Works and Buildings they knew that, as the task grew, all the help and support that could be obtained from the architectural and surveying professions would be given in full measure. The remaking of the country would be the work of architects and surveyors after the war. Nothing should be left undone to realise the dream of a new Britain.

The chairman, responding to the toast, said he believed there was unity among the architects and surveyors of this country, no matter to what organisation they might happen to belong. Architects and surveyors were ready to render any assistance to the Government both now and in the reconstruction to come in happier days. By that time, it might be hoped, there would be more than two architects in the House of Commons: they might even be seen in the Upper House, and there might be an Architect Royal and a Surveyor Royal.

WAR-TIME BUILDING PRACTICE

By R. Cotterell Butler, A.R.I.B.A.

48.—PROVISIONAL BUILDING.

5.—A COMPARATIVE SUMMARY OF EMERGENCY STRUCTURAL SYSTEMS.

TWO important subjects in connection with the construction of semi-permanent buildings have been recently discussed: the possibilities of the use of debris, and economic aspects of prefabrication. The many constructional systems evolved for or adapted to meet war-time conditions have already received attention from time to time both in this series and elsewhere, but it is interesting after eighteen months of war to review and compare their characteristics, and to endeavour to develop a general perspective of emergency building development.

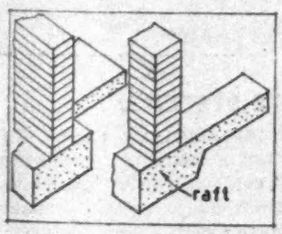
The following summary cannot hope to be completely exhaustive or to treat each system in detail, but every endeavour has been made to summarise the salient features of each system discussed.

In the next article it is hoped to consider the rather miscellaneous yet nevertheless important general factors which must be omitted from this summary to avoid complication.

I. IN SITU SYSTEMS.

TRADITIONAL TECHNIQUES.

(*a*) Composite Preformed Unit and Cast in situ Construction.—Much more use of this traditional form of construction has been made for emergency building generally than might have been thought desirable at the outbreak of war. While, where the work is local and strictly limited, there are good reasons for employing such a system, where extensive building operations on one site are under consideration a more systematised form of construction would seem desirable.



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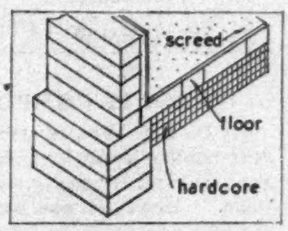
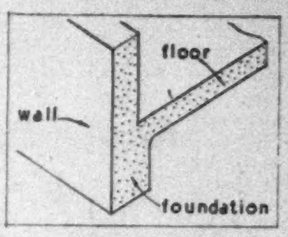


1b.

Homogeneous foundation-floor rafts and separate floor detailing have been almost equally widely adopted. A certain advantage of simplicity and economy would seem to recommend rafts, but on all but ideal soils this demands some reinforcement, which in war-time is something of a disadvantage. An advantage of the isolated floor is that it enables settlement of the walls and floor structures to take place independently (an important advantage where minimum standards of construction are a necessity). It should be noted, however, that a suitably designed damp-course must be adopted, which will allow the settlement to take place without fracture of the membrane, otherwise failure of the waterproofing system must be expected.

(*b*) Preformed Unit Construction.—At a time when a serious shortage of cement seemed likely to continue, the use of a system using only preformed elements (which could be brick) and thus effecting a saving in cement was advocated. Such systems would appear to be quite sound provided that where the foundation soil is of doubtful strength local reinforcement at least to the wall foundation is provided. Settlement of the floor would not be a serious disadvantage for the type of project for which the system was intended, but, as above, care must be taken to provide a sufficiently flexible damp-proofing system.

(*c*) Cast in situ Construction.—Where suitable plant for economical shuttering is available, a carefully worked out all *in situ* system can be an economical proposition for provisional building. It is essential, however, that the size of the project should be sufficiently great to avoid excessive expense involved through having continually to move plant and equipment from one small job to another. An exception, perhaps, is where a limited number of small projects have to be executed, and material and labour for cast construction are available much more readily than for any other system. Generally speaking, however, except where the scheme is highly systematised, cast *in situ* systems will not be found generally economical for emergency purposes.



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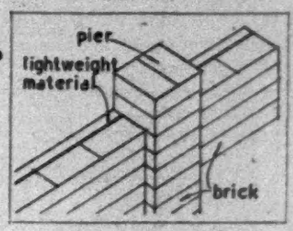


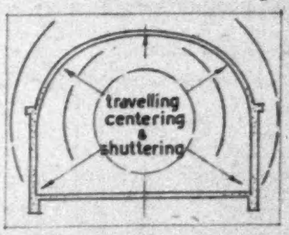
1d.

(*d*) Semi-Frame-and-Panel Construction Preformed Elements.—Intelligent economies have been effected in many schemes—generally in connection with the use of brickwork—by adopting a pier-and-panel system. Nine-inch square piers, with single flat brick panels plus a water-resisting membrane, and with or without an insulating inner lining of light material, have been found quite suitable for single-storey construction.

SPECIALLY DEVELOPED TECHNIQUES.

(*e*) Cast in Situ System.—This scheme, evolved for the erection of large-scale groups of hutments or similar projects, is based upon not only the use of properly designed permanent shuttering, but additionally of mechanical equipment both for mixing the concrete and distributing it from a limited number of positions on the site by means of a pump and pipeline. This system—provided it is used for sufficiently extensive projects—makes *in situ* reinforced concrete construction an economical proposition. The design of the shuttering enables the whole of the structure (foundations, floors, walls and roof) to be constructed homogeneously out of reinforced concrete. Considerable natural rigidity is thereby obtained, which enables the amount of reinforcement necessary to be kept extremely low.

(*f*) Arch System, Preformed Elements.—A number of constructional systems developed for war-time applications have been based upon the principle of the arch, with a view to eliminating the need for tensile reinforcement in spanning a structure. Segmental, semi-circular, and parabolic sections have all been adopted for various systems.



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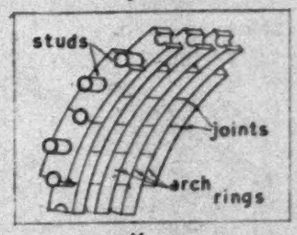


1f.

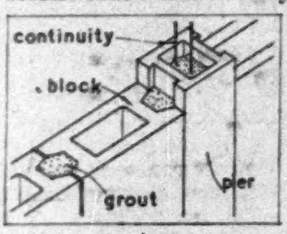
Arched structures using only a limited amount of centering are now being erected in normal brickwork without the use of special bricks of any kind, and successfully eliminate any need for reinforcement. Lighter structures using wire or light rod reinforcement have also been developed, and in every case the amount of reinforcement required has been kept at a minimum. In addition to the *in situ* structures discussed here, arch forms built up of elements which are sufficiently large to warrant the system being considered a prefabrication one, have been produced, and are discussed under the appropriate section.

One type of arch which deserves mention is the centreless scheme designed specifically for vibrated concrete units. These are of small size and are provided with lugs which

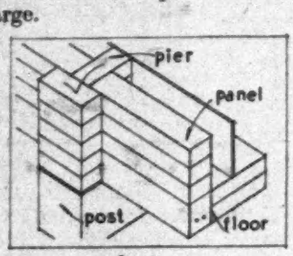
enable successive arch rings to be built up upon preceding ones. The first ring is supported by the lugs keying to an end wall.

(*g*) FRAME AND PANEL IN SPECIAL PREFORMED UNITS.—A logical development of the simple 4½-in. brick wall with brickwork piers is the use of similar piers either of brickwork or reinforced concrete in combination with lightweight blocks as panel infilling. When the size of the panel units becomes considerable this may, of course, be considered primarily a prefabrication system. However, much development of such systems using quite small preformed elements has been made.

The advantage of concrete over brickwork for the construction of the piers is the ease with which elements may be made having special nibs for jointing to the panels. Where brickwork must be used, and some form of cover nib be provided, either special bricks must be made or nibs be obtained by bonding—in which case the pier tends to become rather unnecessarily large.



1g.



2a.

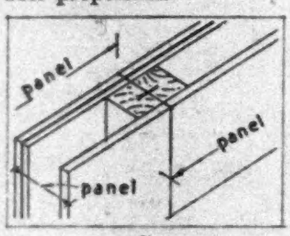
2. PREFABRICATION SYSTEMS.

(*a*) SITE-PREFABRICATION.—The principle of site-prefabrication—originally set out as a specific structural system in this series of articles—may be said to provide a method whereby the advantages of prefabrication may be extensively obtained with materials which do not normally lend themselves to prefabrication. This is particularly valuable in the case of brickwork, enabling this eminently suitable war-time material to be employed at maximum economic efficiency.

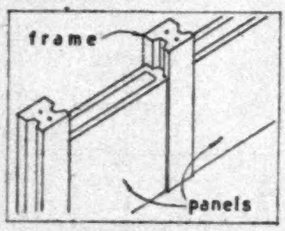
No reference need be made to the details of the system, as these have already been discussed in full. It is sufficient to remark that its basis is the production of large elements in a site factory, under ideal working conditions, by means of special equipment enabling comparatively unskilled labour to be employed, and the subsequent rapid erection of the elements *in situ* by mechanical means.

Thus the advantages of prefabrication are obtained, without the inherent difficulty of transporting massive prefabricated elements arising.

(*b*) INTEGRAL FRAMED-PANEL SYSTEMS.—As distinct from systems consisting of the use of separate frame and panel elements, some materials lend themselves to the construction of elements which incorporate all the framing necessary. Such systems are almost entirely confined to timber and steel, although the use of lightweight panels framed by vibrated or simple dense-concrete members remains a practicable proposition.



2b.



2c.

Although the use of either timber or steel as a primary structural medium for war-time purposes must be considered undesirable, and wholly timber- or wholly steel-framed panels therefore out of the question, nevertheless the advantages of super-lightweight constructional schemes based upon the use of composition panels such as wood-wool concrete or fibre materials, lightly framed in either steel or timber, must not be overlooked.

(*c*) FRAME-AND-PANEL SYTEMS.—A greater variety of prefabrication systems suitable for economic and rapid execution would seem to belong to this category than any other. The scope of systems based on the use of separately fabricated frame elements and panels is practically unlimited. Examples:

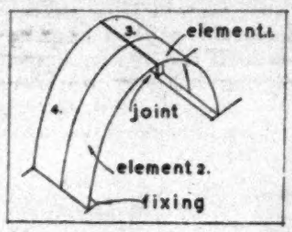
Steel frame—pressed metal panels.
Steel frame—composition board panels.
Steel frame—light aggregate concrete panel.
Steel frame—vibrated concrete panels.
Steel frame—laminated timber panels.
Timber frame—laminated timber panels.
Timber frame—composition-board panels.
Concrete frame—light aggregate concrete panels.
Concrete frame—vibrated concrete panels.

Obviously, the all-timber or all-steel systems are unsuitable in the present situation.

(*d*) FRAMELESS ELEMENT SYSTEMS.—Prefabricated elements which are themselves sufficiently rigid to require no framing for stiffening, and which are so designed that they themselves interlock without the need for jointing piers, are usually to be found in connection with arch forms of construction. The reasons for this are obvious. The arch system is, generally speaking, the only prefabrication one in which roofs and walls form a continuous structural element, and need for framing specifically to support the roof is therefore unnecessary.

Arched structures have been produced in pressed steel in which the prefabricated structural element extends from one side to another, as well as those where each element forms a half span jointed at the apex.

Other important emergency structures of this type consist of half-arch elements produced in lightly reinforced concrete, and a similar system fabricated from a lightweight material of the stabilised sawdust class.



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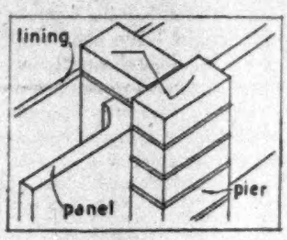


3a.

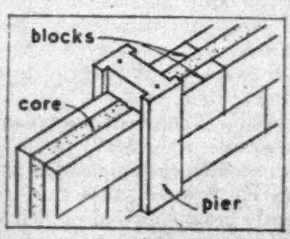
3. COMPOSITE SYSTEMS.

(*a*) IN SITU FRAME AND PREFABRICATED PANEL CONSTRUCTION.—Normally this is not a frequent combination, since framing is usually considered eminently "prefabricatable." However, war conditions do in certain instances indicate sound reasons for adopting such a combination.

In some localities the use of steel for framing involves considerable freight expenditure; timber may be unobtainable, yet supplies of light material for panelling readily available. Under such circumstances the use of built *in situ* concrete or brickwork frame elements in combination with prefabricated panels would be a feasible proposition.

(*b*) PREFABRICATED FRAME AND IN SITU PANEL CONSTRUCTION.—Much more usual than the above case is the use of prefabricated frame elements in conjunction with *in situ* built panels. At least one official scheme has employed light steel framing (sufficient to support the roof structure and provide wall stiffening), with panel infilling of lightweight wood-wool concrete panels built *in situ*.

(*c*) PREFABRICATED FRAME AND IN SITU COVERING.—A particularly satisfactory structural scheme is based upon the use of fabric stretched *in situ* over a light framework, and subsequently rendered with cement mortar. Such a system properly carried out will result in a structure the rigidity and weather-resistance of which will be found out of all proportion to the actual bulk of material employed.



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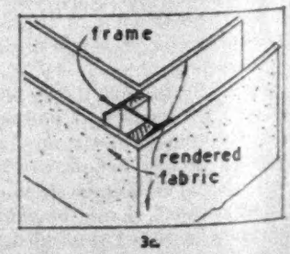

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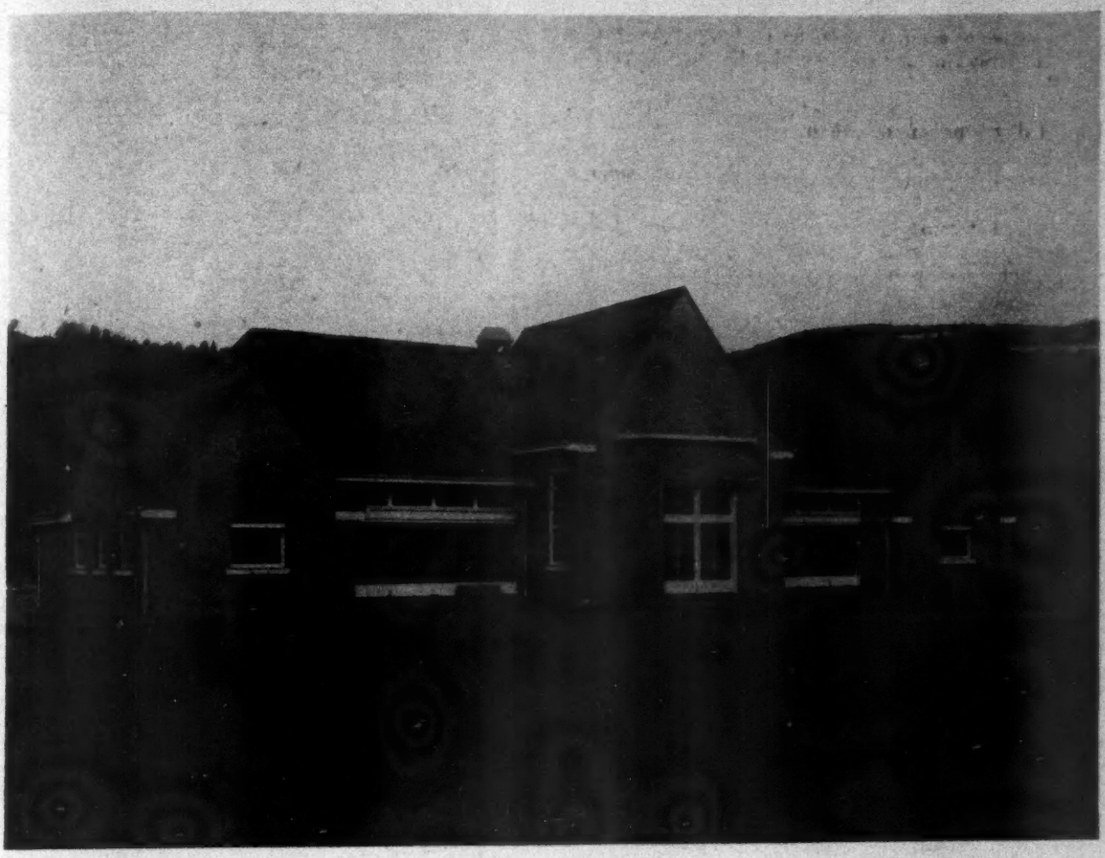
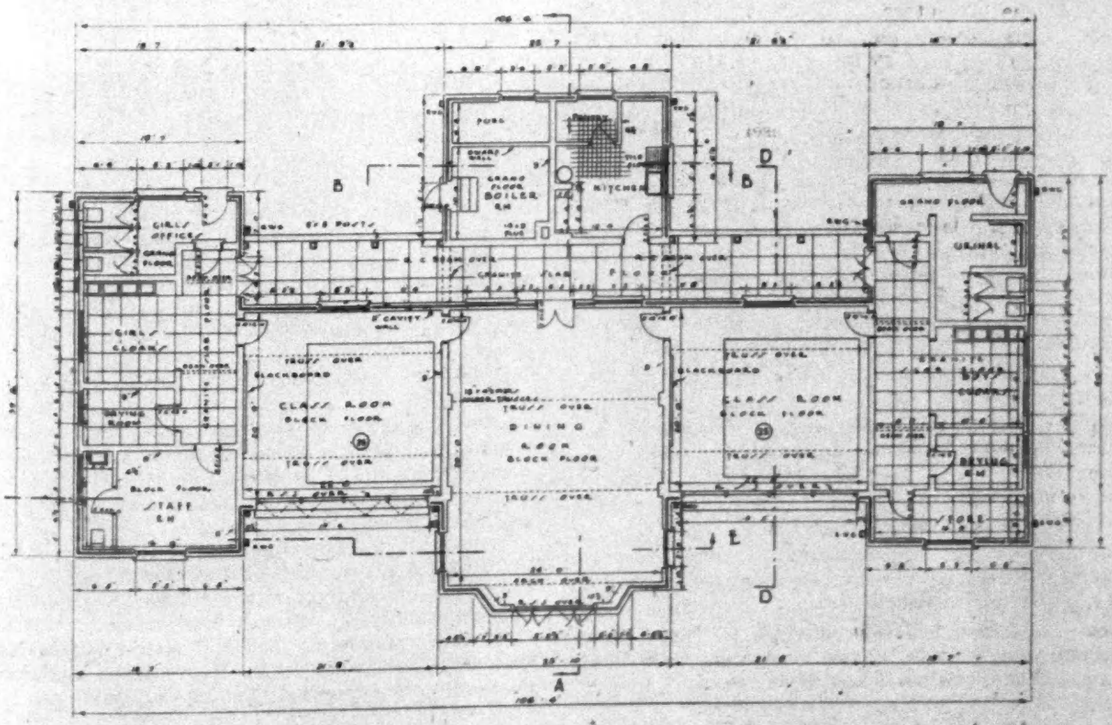
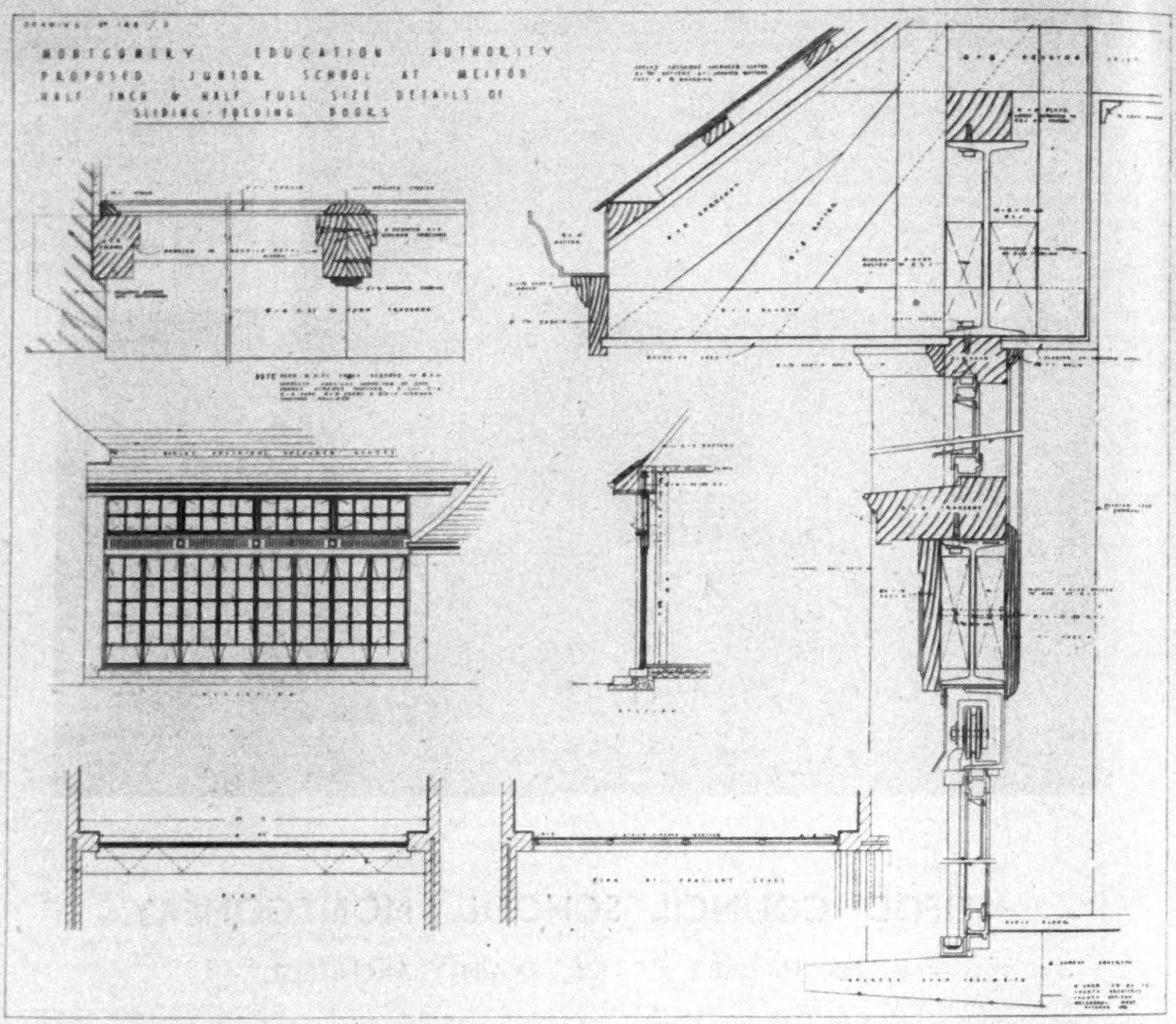


MEIFOD COUNCIL SCHOOL, MONTGOMERY

MR. H. CARR, F.R.I.B.A., COUNTY ARCHITECT.




MONTGOMERY EDUCATION AUTHORITY
PROPOSED JUNIOR SCHOOL AT MEIFOD
HALF INCH & HALF FULL SIZE DETAILS OF
SLIDING · FOLDING DOORS

DETAILS OF SLIDING-FOLDING DOORS.

MEIFOD COUNCIL SCHOOL, MONTGOMERY.

MR. H. CARR, F.R.I.B.A., COUNTY ARCHITECT.

PROBLEM.—Shortly after the outbreak of war the Church School in the village of Meifod, Montgomery, was condemned as unsafe, and it became imperative to build a new juniors' and infants' school. In their reorganisation scheme, the Montgomery Education Authority had decided to transfer the seniors to the proposed associate school that was to be built at Llanfair Caereinion, a distance of seven miles.

This associate school, plans of which had been approved by the Board of Education, consisted of a senior school and secondary school linked together by an assembly hall. Technical and subsidiary rooms were for the common use of both schools. The war has delayed this interesting scheme, which was an effort to avoid duplication of expensive buildings in rural areas.

SITE.—The site for the new school at Meifod consists of three acres, situated in the lovely valley of Meifod, and the school is placed in a delightful setting.

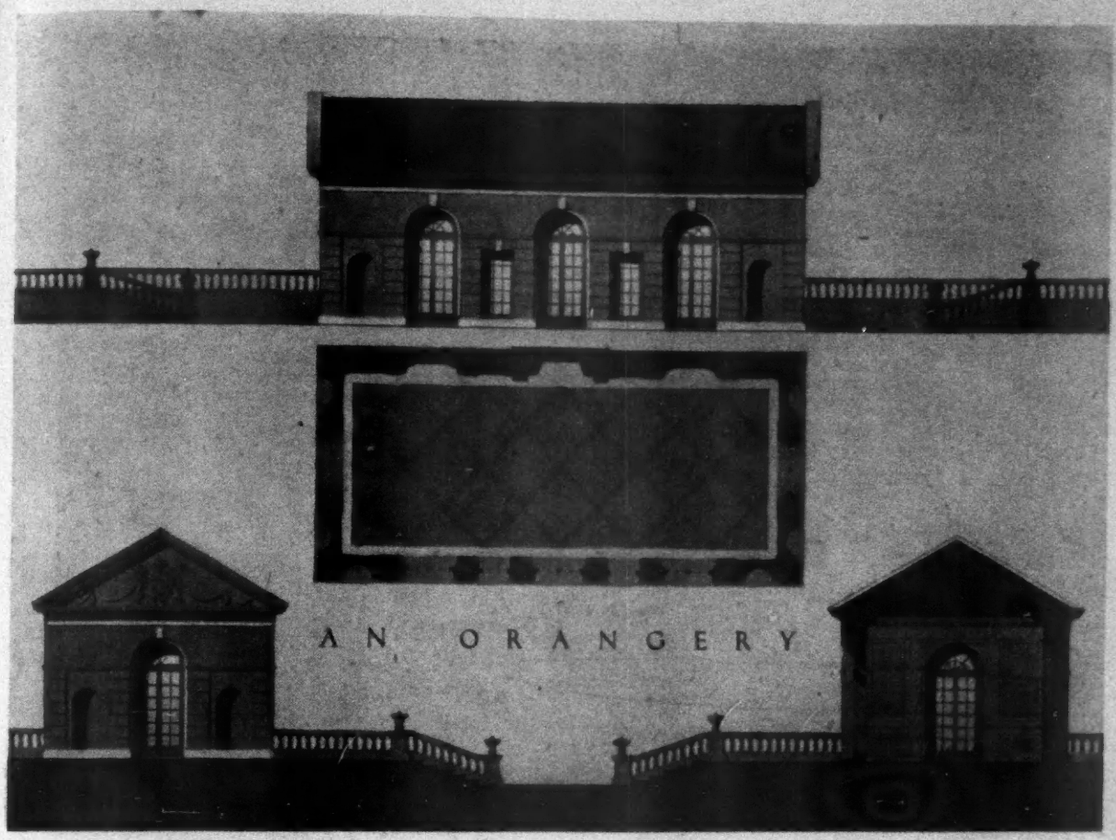
PLAN.—The accommodation provides for sixty juniors and infants, and consists of two classrooms with dining-room and kitchen, cloakroom and drying-room.

CONSTRUCTION.—The plastering in the dining-room hall has been enriched by cornices, ceiling bands and plaster motifs on walls depicting country life. The school has been provided with a gravitation water supply, electric lighting and central heating, including coils in drying-room.

To harmonise with the quiet tones of the stone buildings in the village, grey-brown bricks have been used for external brickwork and grey-green colloidal slating for roofing. The fronts of both classrooms are constructed of steel folding-windows coming down to floor level. These windows are shielded by projecting wings, and have a south-east aspect. Rock gardens will be formed in front of each classroom, and fruit trees and conifers of varying species are to be planted around the school.

The work has been designed by Mr. H. Carr, F.R.I.B.A., F.S.I., the Montgomery County Architect.

The general contractors are Messrs. J. Deam and Co., builders, Llanfyllin. Facing bricks were by Williamson Cliff, Ltd., Stamford; colloidal slates by Oakley Slate Quarries; steel windows by Henry Hope and Son; and flooring by the Granwood Flooring Co., Riddings.



HISTORICAL DESIGN : ORANGERY IN 17TH-CENTURY ENGLISH GARDEN.

R.I.B.A. INTERMEDIATE EXAMINATION. PART OF TESTIMONY OF STUDY.

BY KENNETH A. MORGAN (EASTBOURNE SCHOOL OF ART).

THE drawings shown on this and following pages are selected from the complete sets of Testimonies of Study submitted by three students for the R.I.B.A. Intermediate Examination. Taken together, they may be regarded as typical of the standard of drawings submitted for this test.

"The production of a good Testimony of Study whether it be historical study or measured drawing, requires firstly the selection of a suitable subject," writes Mr. Anthony Minoprio. "It is the quality of the building rather than its size which will count, and quite a simple building or part of a building is adequate, provided it is well chosen and well presented.

"Good presentation implies a well-arranged sheet

(*Continued on page* 366.)

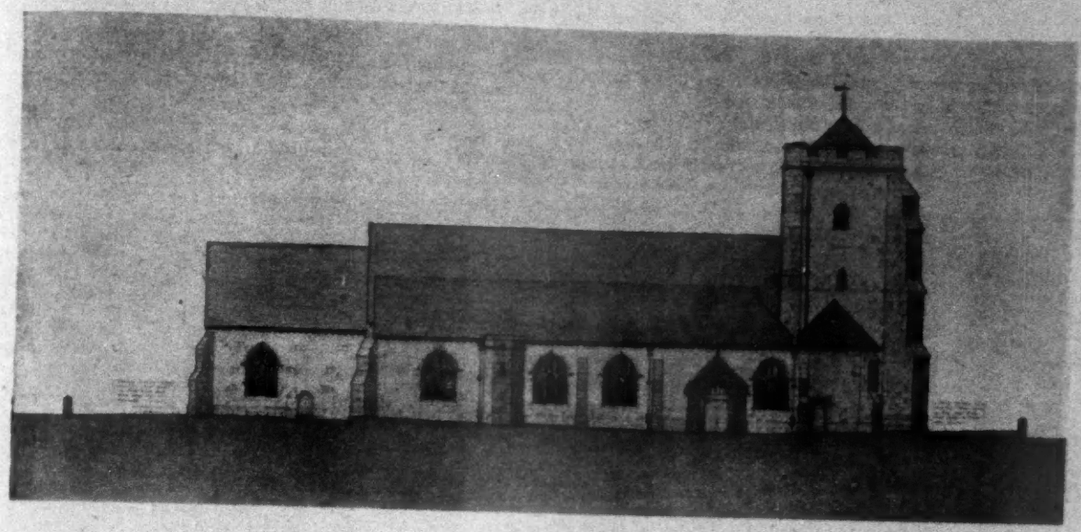
FROM THE MONUMENT OF LYSICRATES, ATHENS.

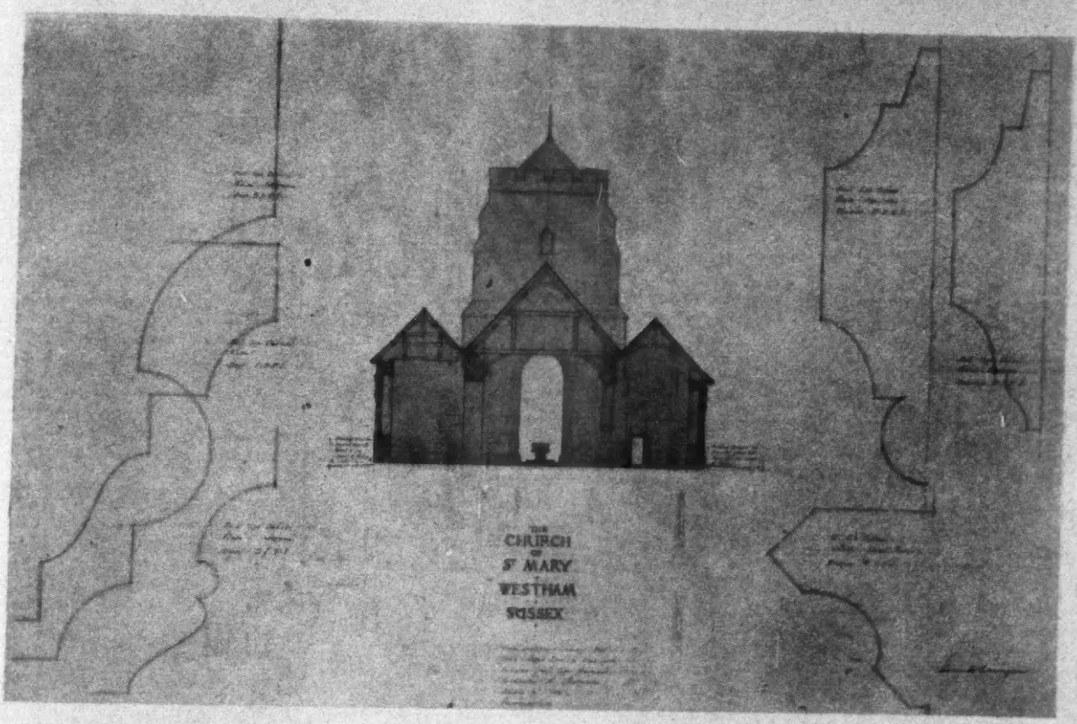
R.I.B.A. INTERMEDIATE EXAMINATION. PART OF TESTIMONY OF STUDY.

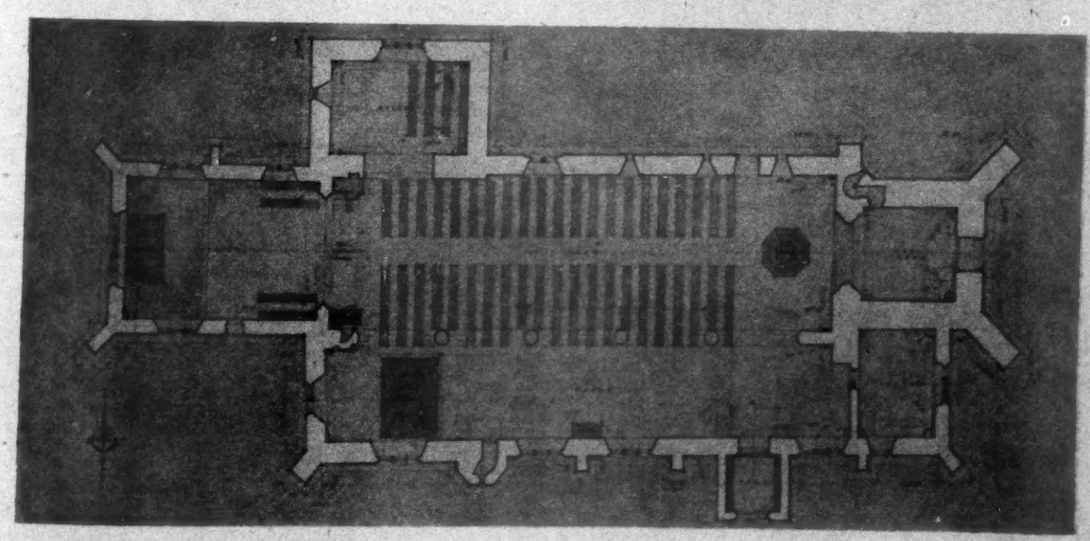
BY H. R. S. FERIN (L.C.C. SCHOOL OF BUILDING, BRIXTON).

DESIGN FOR A COUNTRY HOUSE.

R.I.B.A. INTERMEDIATE EXAMINATION. PART OF TESTIMONY OF STUDY. BY H. R. S. FERIN (L.C.C. SCHOOL OF BUILDING, BRIXTON).







MEASURED DRAWINGS OF CHURCH OF ST. MARY, WESTHAM, SUSSEX.

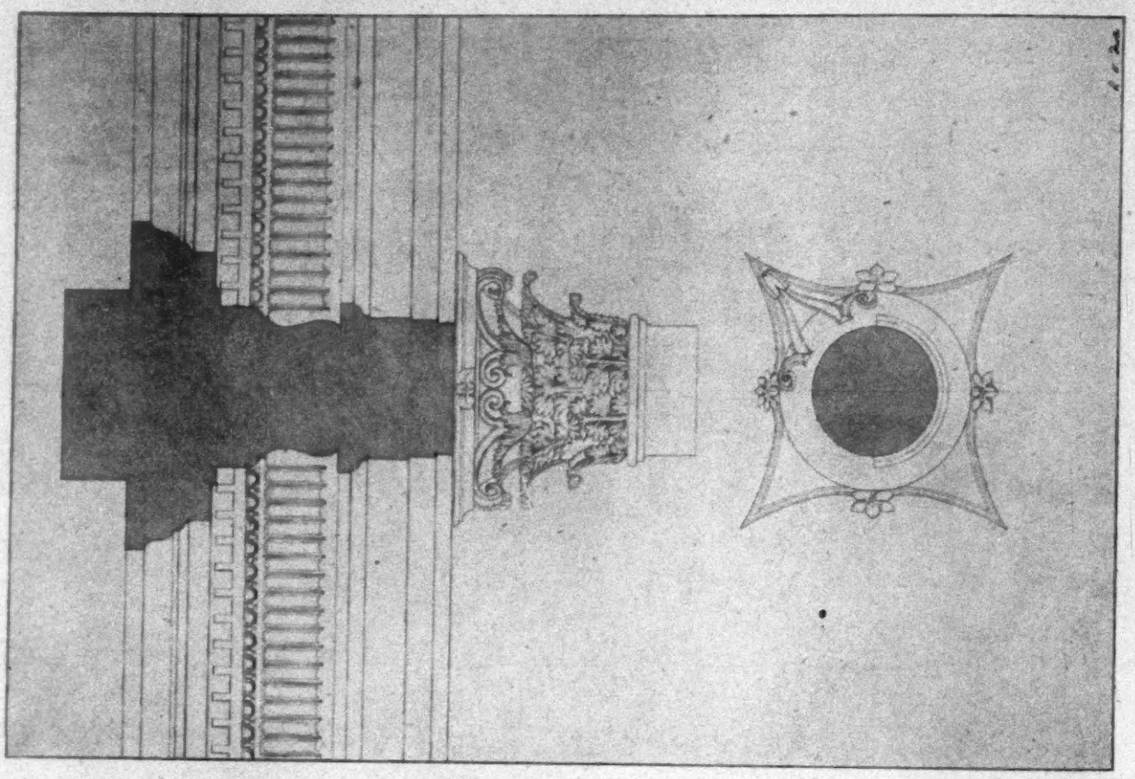
R.I.B.A. INTERMEDIATE EXAMINATION. PART OF TESTIMONY OF STUDY.

BY KENNETH A. MORGAN (EASTBOURNE SCHOOL OF ART).

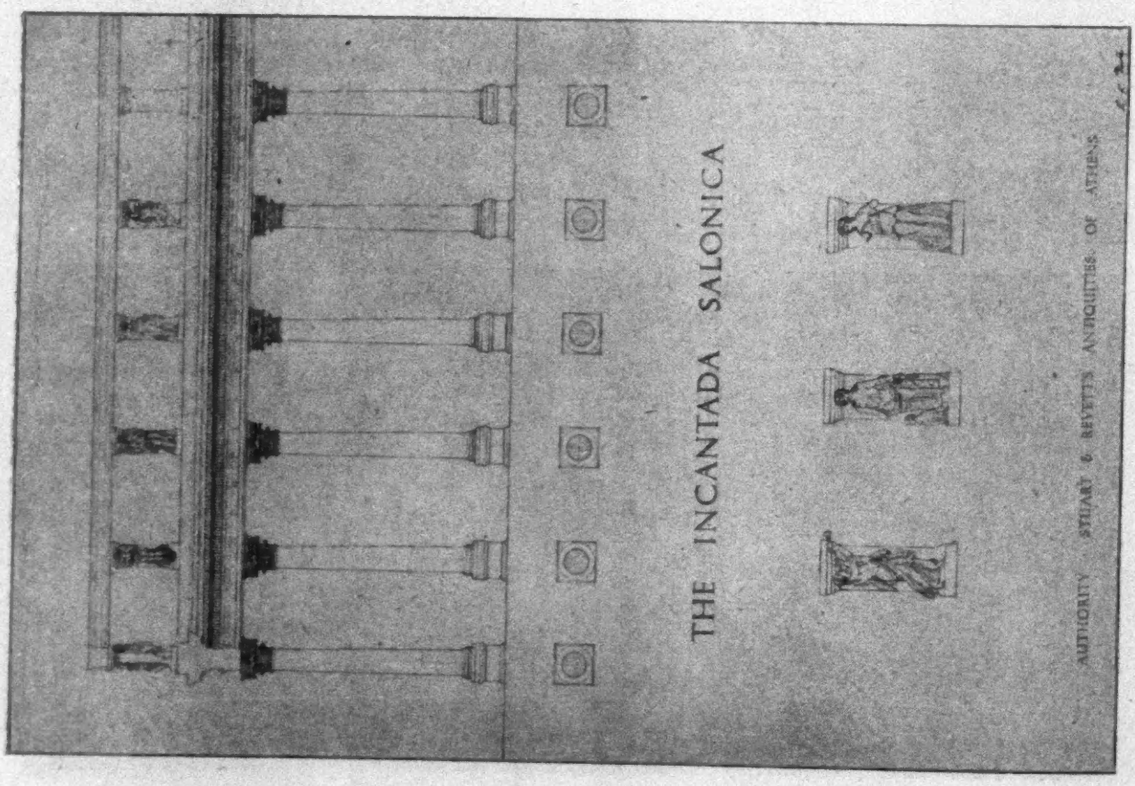
(*Continued from page* 363.)

with drawings clearly and cleanly made. Choose smooth paper, and a pencil neither too hard nor too soft—say, *H* or *F*. With water-colour rendering, the best results are obtained if only two or three colours are used, in light washes. Shadows should be correctly cast, except on the working drawings, where they are not required. All drawings should have the scale clearly shown, and plans of the house must show the north point. Finally, good lettering of titles is essential."

The size of the drawings from which our reproductions are made was roughly Imperial—22 in. by 30 in.



THE INCANTADA, SALONICA : SHEET OF DETAILS OF THE ORDER.



HISTORICAL STUDY, THE INCANTADA, SALONICA : GENERAL SHEET.

R.I.B.A. INTERMEDIATE EXAMINATION. PART OF TESTIMONY OF STUDY. BY R. KEITH FOWLER (EASTBOURNE SCHOOL OF ART).

THE WAR DAMAGE ACT.—I

By W. T. CRESWELL, K.C., Hon.A.R.I.B.A., A.S.I., etc.

In the leading article of *The Builder* of April 4, it was shown that the new Act is divided into four parts, severally dealing with four categories :—

Part I.—Buildings and other Immovable Property.
Part II.—Goods.
Part III.—Amendments of Part II of War Risks Insurance Act, 1939.
Part IV.—Miscellaneous and General.

In the following notes on the provisions of the Act only those parts will be considered which appear more particularly to affect architects and engineers, together with contractors, sub-contractors, manufacturers and suppliers in the building and engineering industries.

PART I.

Buildings and Other Immovable Property.

The War Damage Commission.—This part covers all houses and other buildings, together with their land, and it is to be administered by a War Damage Commission which has already been set up.

The Chancellor of the Exchequer has stated that one of its first duties will be to settle a simplified form of claim. This is now issued and is called "C.1." It takes the place of the complicated and much-criticised "V.O.W.1" hitherto in use. Its object is to make the details of the claim more concise, and to simplify the procedure in dealing with it.

Under Section I of the Act the functions of the Commission include carrying into execution the provisions of Part I of the Act in so far as it relates to the making of payments in respect of war damage to land; also certain other functions conferred on them by the Act. Such functions (including any discretionary powers exercisable by them) are to be performed in accordance with regulations made by the Treasury. The Treasury is given very wide powers indeed, but it is enacted that the regulations made by them are to be of a general character. No regulation can be made which would lead to the Commission going beyond the powers it is intended to have, or to its acting in a manner inconsistent with the provisions of the Act. This, of course, is in accordance with the rule that nothing can be permitted *ultra vires* the provisions of a statute.

The membership, capacity and proceedings, and the necessary appointment, of officers and servants of the Commission, together with their remuneration, are more particularly described in the First Schedule to the Act.

Definitions of terms as used in the Act are mainly given in Section 95 of the Act, but those which affect our notes are more usefully given at once. (See Section 80.)

"War Damage."

(*a*) damage occurring (whether accidentally or not) as the direct result of action taken by the enemy, or action taken in combating the enemy or in repelling an imagined attack by the enemy;

(*b*) damage occurring (whether accidentally or not) as the direct result of measures taken under proper authority to avoid the spread of, or otherwise to mitigate, the consequences of such damage as aforesaid;

(*c*) accidental damage occurring as the direct result—

(i) of any precautionary or preparatory measures taken under proper authority with a view to preventing or hindering the carrying out of any attack by the enemy; or

(ii) of precautionary or preparatory measures involving the doing of work on land and when taken under proper authority in any way in anticipation of enemy action.

In both (i) and (ii) the measures taken must involve a substantial degree of risk to property. "Land" means land in the United Kingdom, and includes :—

(*a*) any buildings or works situated on, over or under the land in question;

(*b*) anything which, on a valuation for rating purposes for the time being in force made by reference to the accounts, receipts, profits or output of an undertaking, was treated as the subject of an occupation enjoyed by the persons carrying on the undertaking;

(*c*) such plant and machinery in relation to *land* comprised in the hereditament for rating purposes . . . as would if the land were a hereditament to which Section 24 of the Rating and Valuation Act, 1925, applied, be by virtue of the provisions of that Section and of the Plant and Machinery (Valuation for Rating) Order, 1927, deemed for the purposes mentioned in subsection (1) of the said Section to be part of the land, or where the land is a hereditament to which the said section applies, such plant and machinery as is so deemed for those purposes to be part of the land.

"Building" includes a building in an incomplete state, and in relation to such a building the expression "use" includes potential use.

"Works" includes any structure.

"Hereditament" (see Section 2). Under the Act hereditaments are of two kinds consisting respectively of :—

(*a*) buildings (excluding buildings the use of which is accessory to the use of other land and which would not be readily marketable apart from that other land) or parts of such buildings and the sites of such buildings or of parts thereof; and

(*b*) land other than aforesaid.

Payments, their nature and amount, will be dealt with in article II following.

OBITUARY

Mr. F. W. Troup, F.S.A., F.R.I.B.A.

We regret to record the death of Mr. Francis William Troup, F.S.A., F.R.I.B.A., at the age of 81. Mr. Troup, who was a son of the late Rev. Robert Troup, M.A., of Huntly, Aberdeenshire, was articled to Messrs. Campbell Douglas and Sellars, of Glasgow (1877-82), and studied at the R.A. Schools from 1884 to 1886. He won the Silver Medal for Measured Drawings at the R.A. Schools in 1885, and the Silver Medal, Soane Medallion Competition, in 1888. Beginning private practice on his own account he achieved considerable success, carrying out a great variety of work, including the Farnley Iron Company's offices, near Leeds; engineering laboratories, Cambridge University; Rampton Criminal Lunatic Asylum; the Hall at 6, Queen's-square, Bloomsbury, for the Art Workers' Guild (of which body he was Master in 1923; bookbinding works, Letchworth, for Messrs. W. H. Smith and Son; envelope factory, Union-street, S.E., and "Blackfriars House," New Bridge-street, E.C., for Messrs. Spicer, Ltd.; Mansfield House University Settlement, Canning Town; Memorial Almhouses, Farnley, near Leeds; the houseboat "Venture" for A. G. Vanderbilt, and many other works, including private houses, war memorials, etc. He was associated with Sir Herbert Baker, R.A., in the reconstruction of the Bank of England, for which institution he carried out a gold refinery and other work on his own account. He was elected an Associate of the R.I.B.A. in 1889 and a Fellow in 1899. We hope to publish a memoir in an early issue.

Mr. D. C. Maynard, O.B.E., A.R.I.B.A.

We regret to record the death of Mr. Dudley Christopher Maynard, O.B.E., A.R.I.B.A., at Coulsdon, Surrey. Mr. Maynard, who was born in 1874, was the eldest son of the late Dr. Maynard. He was articled to Mr. Humphries, of St. Leonards, and later acted as an assistant in various offices. He entered into partnership with Mr. A. B. Hayward in January, 1900, as Hayward and Maynard, and so continued up to 1936, when, by mutual consent, the formal partnership was dissolved, though he still continued to be associated with Mr. Hayward and to share offices and expenses as before.

He held personal appointments as Architect to the Red Cross and the Royal Free Hospital, as well as Surveyor to the Edward Edwards Charity. He carried out, in conjunction with Mr. Hayward, commissions for many domestic and business premises both in London and the country during the partnership, and he was personally responsible for hospitals at Roehampton and Sidcup during the last war, and for his services during that period he received the O.B.E. in 1918.

Latterly he designed and carried out many commissions for public-houses and hotels, including the Drift Bridge Hotel, Epsom Downs, and the Parkway Hotel, Leeds.

He was married and leaves two sons and a daughter. Both the sons have qualified for the architectural profession, but at the present time both are subalterns in the Royal Artillery.

Mr. Maynard became an Associate of the R.I.B.A. in 1898.

Mr. Richard T. Taylor.

Mr. Richard T. Taylor, whose death at Oldham at the age of 77 is announced, was partner in the firm of Winder and Taylor, who designed many public buildings in Oldham, including the Werneth and Townfield Fire Stations, and a number of schools. They were also architects for the extension to Oldham Hulme Grammar School and Oldham Free Library, and for the building of All Saints' Church, Northmoor.

Mr. H. Eastwood.

The death has taken place at Halifax, at the age of 69, of Mr. Harold Eastwood, who had served for fifty-three years with Messrs. C. F. L. Horsfall and Son, architects and surveyors. Mr. Eastwood designed the Halifax Children's Holiday Home and the Booth Town-road Methodist Church.

Mr. J. W. Hampsheir.

We regret to announce the death of Mr. J. W. Hampsheir, director and general manager of Messrs. Keith Blackman, Ltd., at the age of 71. Mr. Hampsheir joined the company in 1892, became secretary in 1905, was elected to the board in 1921, and appointed general manager in 1925. "He served the company loyally and with conspicuous ability," writes a friend, "and the directors feel keenly the loss of so valued a colleague." The funeral took place at Golders Green.

Lancs Architectural Assistants on Loan.

A scheme has been submitted by the Lancashire County Council through the Lancashire Non-County Boroughs Association of Mutual Aid, under which authorities would loan architectural assistants to an authority or authorities which had been bombed, so that such assistants concerned could assist in examining damaged properties.

Piecework and Payment by Results.

Mr. Luke Fawcett, Acting-General Secretary of the Amalgamated Union of Building Trade Workers, has written a pamphlet, just issued by the A.U.B.T.W., entitled "Building Workers and the Work of the Building Industry," in which he examines the practice of piecework and payment by results. His conclusion is that to introduce the system into the building industry, under war conditions, would be "the worst way of getting results." It would, he affirms, have a disastrous retrogressive effect on the industry and would hamper rather than quicken production.

NATIONAL PLANNING

GARDEN CITIES AND TOWN PLANNING ASSOCIATION CONFERENCE, OXFORD

A CONFERENCE on National Planning, which was held by the Garden Cities and Town Planning Association at Oxford on March 28-30, gathered together many of the leading town and country planners and representatives of many important cities.

The list of delegates included Prof. Patrick Abercrombie, F.R.I.B.A., P.-P.T.P.I.; Miss J. F. Adburgham, L.R.I.B.A.; Prof. R. A. Cordingley, Manchester University; Miss Mary Crowley, A.R.I.B.A.; Mr. W. R. Davidge, F.R.I.B.A., F.S.I., P.-P.T.P.I.; Miss Elizabeth Denby; Mr. John Dower, M.A., F.R.I.B.A.; Mr. D. E. E. Gibson, M.A., A.R.I.B.A., City of Coventry; Mr. F. Leslie Halliday, A.R.I.B.A., Manchester; Prof. W. G. Holford, A.R.I.B.A., Liverpool; Mr. G. A. Jellicoe, F.R.I.B.A.; Mr. E. C. Kent, L.R.I.B.A.; Miss J. G. Ledeboer; Mr. H. J. Manzoni, M.Inst.C.E., City of Birmingham; Mr. P. V. Mauger, F.R.I.B.A., Welwyn Garden City; Mr. F. J. Osborn, Hon. Secretary, Garden Cities and Town Planning Association; Mr. R. Barry Parker, F.R.I.B.A., P.-P.T.P.I.; Mr. C. B. Parkes, L.R.I.B.A., Bournville Village Trust; Mr. G. L. Pepler, F.S.I., Chief Town Planning Officer, Ministry of Health; Mr. J. H. Sayner, F.R.I.B.A., M.T.P.I., South Bucks Joint Planning Committee; Mr. Lewis Silkin, M.P., L.C.C.; Sir Ernest Simon, Manchester; Mr. Max Tetlow, A.R.I.B.A.; Mr. W. Harding Thompson, F.R.I.B.A., P.-P.T.P.I.; Mr. F. E. Towndrow, A.R.I.B.A.; Mr. A. C. Bunch, F.R.I.B.A., and many others. Following are reports of two of the papers read at the Conference.

PROBLEMS OF DECENTRALISATION:

CENTRAL REDEVELOPMENT AND SATELLITE TOWNS.

In the course of a paper on this subject, MR. D. E. E. GIBSON, A.R.I.B.A., City Architect, Coventry, said the case of Coventry must be of great interest to planners at the present time, and he proposed to tell them a little about the suggestions for replanning which the City Council had adopted as a basis for Lord Reith's investigation. In these questions of decentralisation, central redevelopment and satellite towns were all involved in one way or another. The old Coventry had grown very rapidly since the last war, and the new population was somewhere around 250,000. The public services, such as libraries, swimming-baths and the like, had been provided for a population of about 150,000. The centre of the city consisted of a mixture of factories, slums, shops and houses, with narrow, congested streets, inadequate for present-day traffic. The open spaces which had existed in mediæval times had, in the main, been built over. Shopping facilities were of very poor quality, mainly old buildings with new fronts lining narrow streets, which carried heavy traffic as well as shopping traffic. The land values in the central area were very high.

"As a result of the bombing," proceeded the speaker, "the centre of the city has been severely damaged, and the central shopping and business premises are practically bombed out of existence. Large areas have been completely devastated, and there are very few substantial buildings remaining in this area. The City Council has had a scheme prepared showing the suggested redevelopment of a small central area.

"The first obvious problem which faces a planner is the question 'What size of city am I to plan for? Is Coventry to remain an industrial centre for motor-car, motor-cycle and machine tool production, or will there be movement towards London or other centres for such industries?' Obviously one must have some idea of the population one is planning a library for, which is only one small example. The answer to this question can only be given if and when some national planning arrangements have been made. It is vital, therefore, that national planning should immediately be considered by the Government, because such information is required by all planning authorities in the whole country. For the purpose of the suggested redevelopment scheme, it has been assumed that the population will remain at about the present figure, and if any great increase should occur, then it could be accommodated in the form of satellite wedges, possibly grouped around some of the new shadow factories, preserving the agricultural land and industries within easy reach of the present city.

"In the actual planning, first consideration was given to transport and roads; and as Coventry is primarily of radial road form, it was necessary to endeavour to provide a suitable ring roads system, which has been devised, using, where possible, existing roads. New cuttings to form rings between existing roads would have to be made at various points. The innermost ring coincides with the central area for which the replanning scheme has been done. This inner ring coincides with the present railway station, and at this point it is hoped to place long-distance coach stations and a local 'bus station and garages, so that all transport facilities emerge upon one point. The ring and radial road system which has been suggested would discourage through traffic from passing through the centre of the city.

"The first buildings to proceed after the war would, I think, be the shopping and business premises, and these have been planned on sites which, in the main, have been very severely damaged. The area concerned happens to coincide with the previous shopping area, and so there will be no change in the surface utilisation. It is interesting to know that in this replanning an increase in the shopping frontage has been obtained above what was there before. This was a principle which should be accepted, especially bearing in mind that previously there were narrow skins of shops down traffic streets, with little courts and alleyways, and little bits of slum housing tucked away on land at the back, which was a very wasteful state of affairs. A central *place* has been obtained out of the replanning in the centre of the city, and this *place* is framed by the new buildings which enclose the mediæval treasures of the old city in the setting of a central city park.

"At present Coventry's industrial workers are housed in central congested streets in courts intermixed with factories and warehouses, and there is a general overcrowding and a minimum of amenity. The more recent type of housing development, at the rate of 5,000 houses a year, has taken the form of 12 to the acre, dwellings in pairs and blocks of four spreading over the surrounding rural areas, with consequent destruction of valuable agricultural land and trees and the very amenities the people moved out to obtain. The question which will have to be decided is whether the damaged central housing is to be rebuilt on its present sites, or should more garden suburbs continue this spread into the countryside, with its consequent expenditure on new road services, new transport, and travelling costs to the people. I think, wherever possible, the method should be to redevelop the fringes of the town centre in the form of neighbourhood units, with their own schools, community centre, essential shops, health clinics and nursery schools. To do this and to release the necessary land for playing space, for planting, for sunlight and air, it will be necessary for some of the dwellings to be quite high in the form of flats. I would like to mention that the process which has been taking place too often has been the pulling down of a few of the waste slums and the rebuilding of houses to accommodate them on the fringe of the city, owing to the fact that there was no comprehensive clearance which would have enabled rehousing to take place on the sites where the people had lived before, and it seems to me that it is desirable to encourage large clearance areas rather than the present tendency of small isolated areas, which cannot be dealt with satisfactorily.

"The building industry, both as regards labour and material, will be taxed to its utmost, and I think there will have to be some form of control deciding which building will be allowed to proceed and which will have to wait. This will call for some Government control of materials, labour and work. The output of building materials should be handled with as much forethought and planning as possible, and research by bodies like the Building Research Station should be proceeding to discover methods of prefabrication which will help to reduce the labour requirements to the minimum. It may well be that this would utilise to some extent new industries and the new engineering craftsmen who have been trained in such great numbers for war-time purposes.

"Replanning of the type which will have to be undertaken will involve many difficulties, especially those concerning the ownership of many individual sites, where the replanning means either open spaces on these sites or some other shape of building using that site and part of adjoining site. The first method which suggests itself would be for the local authority to purchase the land in question, either compulsorily or otherwise, and to resell this land on the best possible terms after reallocating it in the form of new building sites. By this method the local authority would have to lay down a large sum over a short period, but it might, after reselling the new plots, recoup all of its outlay and it might make a profit.

"Another method would be similar to the last, but, instead of selling the land, for the corporation to lease the land to developers. Another method would be the compulsory purchase of the land by the local authority and the construction of the buildings by the local authority. Another possible method would be the compulsory pooling and redistribution of ownerships on the Lex Adickes principle, which is extensively used in Germany.

"A further method would be the use of the present town planning legislation, but it would be necessary to have much more positive and stronger powers. There would be difficulties in co-ordination of adjoining properties. A small owner would barely be able to afford the cost of the sort of building which might be required in his part of the scheme. Zoning would have to be more rigid than is understood by the normal reading of the present town planning legislation.

"All these methods have their advantages and disadvantages, depending largely upon one's point of view, but the essential things which all would agree must be obtained are some very rigid control of elevations and building uses.

"An opportunity is here now of remodelling many of our cities so that they once more may become places to enjoy living in rather than to escape from. It is good to know that we have Lord Reith and Mr. Arthur Greenwood now taking great interest in these matters, but I only hope that the Government may realise the urgency of bringing into being whatever legislation may be proved most satisfactory.

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PLANNING PRINCIPLES

PRESENT MEASURE OF AGREEMENT.

Notes for discussion on this subject were contributed by Mr. W. HARDING THOMPSON, F.R.I.B.A., P.P.T.P.I., as follows :—

Objectives.

Main objectives for which planning principles must be established; objectives to be kept constantly in view in formulating national, regional and local planning policy :—

(*a*) The use of all land, regardless of ownership or system of land-tenure, for the purpose to which it is most suitable, *in the interest of the community as a whole.* (Subject to compensation for individuals who suffer loss.)

(*b*) The reconstruction or improvement of existing towns, with the object of securing stability of employment, and health, convenience and amenities for the town-dweller; the relief of congestion and traffic in the central areas and reduction of population density in the residential districts; maintenance of contact with rural life.

(*c*) The provision of planned facilities and services for industry in or near the smaller towns in accordance with national and regional plans. Strict control or prohibition of new industries in the large congested cities.

(*d*) Agriculture, as a basic industry, to be so regarded in new planning legislation, and fully protected against the intrusions of other industries. High quality productive land to be permanently reserved under planning powers.

(*e*) Prevention of the further depopulation and impoverishment of rural areas due to the attractions and speculative opportunities offered by the big city.

National Planning Policy.

(*a*) Argument for decentralisation may be regarded as proved, and, as a basis for policy, sufficiently acceptable for the Central Planning Authority to take action.

(*b*) Local planning authorities now await guidance from a central (or regional) authority before formulating their future industrial policy. Local plans (pre-war) now need review in accordance with national requirements and the recent migration of industry and population. The localised view of planning has widened to embrace the needs of the region, both in regard to employment and to public services of all kinds.

(*c*) A problem for the Central Authority of first importance, viz. : Which towns must expect increase of industrial activity in the post-war period? In which towns or districts should new industries be severely restricted or prohibited? Wanted—a general outline plan on very broad lines for the national " zoning " of industrial activities.

(*d*) Choice of sites for war-time factories need not unduly influence plan for long-term policy. Some war factories may be converted as nuclei for new industrial settlements.

(*e*) Certain basic industries obviously fixed in their location by geographical, geological and other economic factors. Planned redistribution more profitably applied to the great variety of light and mobile industries with a wide choice of location.

(*f*) In selecting towns for increased industrial activity, it is essential to ensure balance of community life. " Single-industry " towns dangerous to stability. Over-specialisation has serious disadvantages. Diversity of small factories to avoid depression following a slump in trade. Small municipal " trading estates " may be possible solution, but development by estate company under control.

(*g*) Importance of providing employment for workers of both sexes and for the older age groups.

(*h*) The special problem of the historic town of individuality and beauty. Those with specialised functions—administrative and educational centres; recreational and health resorts. Are factories desirable here?

Regional Planning : Notes and Queries.

(*a*) The civil defence region. Is this the best unit for regional planning? Too large for practical purposes of preparing schemes. C.D. region should be sub-divided coinciding with the larger Joint Committee areas.

(*b*) Possible solution. Formation of " Industrial and Agricultural Planning Boards," each controlling a division of the civil defence region.

(*c*) Central Authority's powers of control, and advisory functions delegated to Regional Authority. Regional executive to maintain close contact with local planning authorities by means of the Regional Advisory Council—so profiting by local knowledge and experience.

(*d*) Conflicting requirements by various Government Departments must be harmonised by the central or regional authority before transmission to local authorities, otherwise local planning schemes are unduly delayed and confused—some brought to a halt.

(*e*) Provisions in local plans for extensive reservations are beyond the capacity of local authorities to finance, and should be financed by the region or, in the case of national parks, etc., by the Treasury. Need for a Central Planning Fund.

Local Planning Policy.

Before planning for increased industrial activity, a local planning authority or joint committee should decide *the optimum size and population* of the town, having regard to :—

(*a*) Possibility and cost of essential services and houses; (*b*) stability of employment for all groups and ages; (*c*) capacity of the central area to meet needs of growth of town; (*d*) preservation of urban amenities; (*e*) vital necessity of conserving a green girdle of agricultural land, allotments, playing fields, etc.; (*f*) the provision of decentralised community centres at selected points; (*g*) capacity of highways, sewers and water supply to provide for factory requirements.

In the event of the optimum size being exceeded through pressure of events and population, the authority should provide for expansion by means of adjacent " satellites " or independent new communities within the region, each surrounded by a green belt.

Planning Principles on which Further Research Required.

(1) OPTIMUM SIZE OF TOWNS.—Variable and dependent on physical limitations, character and function of town, labour conditions, possible services, strategic situation, and population required to support cultural activities, etc.

(2) MAXIMUM DENSITY OF DEVELOPMENT for urban areas, especially in residential units.

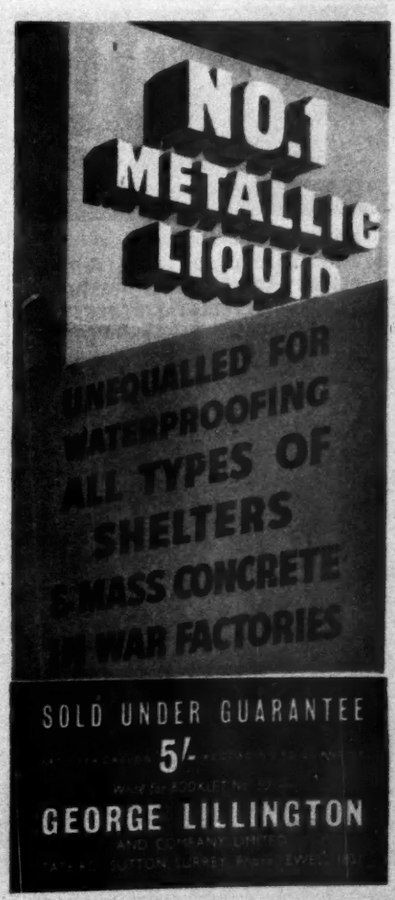
(3) RELATION OF AGRICULTURE TO OTHER INDUSTRIES ESTABLISHED IN RURAL DISTRICTS.

(*a*) Possibility of further decrease of agricultural workers on the land of Britain after the war, due to more scientific and mechanised methods of farming and as part of an Imperial agricultural policy.

(*b*) Effect of such a decrease on the vitality and natality figures in Britain.

(*c*) Possibility of stabilising and revitalising rural community life by the introduction of *selected* light industries in agricultural villages. Seasonal interchange of employment (as in war). Benefits to industrial workers of closer contact with agricultural occupations and rural life.

[Reports of other papers read at the Conference will be given next week.—ED.]



CONSTRUCTION OF AERODROMES

TARGET COST CONTRACTS CRITICISED.

THE Ninth Report of the Select Committee on National Expenditure, just issued (H.M. Stationery Office, price 3d.), deals with the Selection, Acquisition and Construction of Aerodromes, and has been drawn up by the Sub-Committee on Air Services.

Letting of Contracts.

In the course of its report the Sub-Committee turns to the letting of contracts for the preparation of the site and the construction of the aerodrome buildings when the final selection has been made. The work to be done, it is stated, is generally divided into (a) preparation of the aerodrome, (b) construction of runways, (c) construction of accommodation, and (d) subsidiary work, such as diversion of a grid where necessary, water and electricity supply, etc. This subsidiary work is to be agreed at fair and reasonable prices with the local authorities and Supply Boards. The contracts for the preparation of the site and constructional work are sometimes let to different firms, and the clearing of the site is often done, on an agency basis, by the Ministry of Transport. In many cases, however, the whole of the preparation and construction is entrusted to a single contractor.

It appears that in war time the Air Ministry as a general rule have been placing a type of target cost contract which operates as follows. A rough estimate of the cost of the work is prepared by the Works Directorate. This estimate is based upon the Air Ministry's experience of similar work, and it seems that many factors which will inevitably vary the actual cost do not receive detailed consideration at this stage. This may be one reason for the fact that original estimates are usually substantially exceeded. Other reasons may be an expansion or alteration of schemes, higher wages or higher cost of materials. Whatever the cause, final costs in general prove much higher than estimates. The rough estimate is sent out to a selected list of contractors who are informed of the location of the site and invited to quote a fee, in terms of a percentage of the cost, for which they would be prepared to undertake the work. The contract itself provides for a target cost to be determined, after work has been in progress, on the basis of the rates of wages, price of materials, etc., agreed between the surveyors of the department and the contractor as obtaining during the first four weeks of the contract. The contractor receives in addition to his fee a bonus of 25 per cent. of any sum by which admissible costs are less than the target cost, but suffers a penalty of 10 per cent. of the sum by which the admissible costs are greater than the target cost, subject to the amount of the penalty not exceeding the fee payable. In calculating bonus or penalty any variations allowable in respect of increased costs of labour and materials are taken into account.

Although this is now the usual type of contract let for aerodrome construction, the Air Ministry place fixed price contracts in certain circumstances; and a number of such contracts have, in fact, been made since the outbreak

of war. On at least three occasions a contractor when asked to quote a fee for a target cost contract put in alternative fixed price tenders, and was awarded the fixed price contract. The reasons why the Air Ministry have, nevertheless, so largely adopted the target cost system described above are not clear. Four considerations seem to have influenced them :—

(a) They wanted to get contractors to work at once. They thought that this would be impracticable with the system of competitive fixed price tenders; (b) they wanted to retain an element of competition; (c) they wanted to free contractors from the danger of loss which must always be present in all fixed price contracts during war time, owing to difficulties in obtaining a regular supply of labour, plant and materials; (d) they wanted, at the same time, to provide some incentive to economy.

The Sub-Committee do not believe that all these considerations will bear examination.

(a) They do not think there is any force in the idea that a target cost saves time. They have been told by contractors that less than a fortnight is required by experienced firms to prepare tenders for an established type of lump sum contract. They cannot believe that the Air Ministry, with all the knowledge they have gained from the construction of hundreds of aerodromes, now require much time to draw up the bills of quantities. They are convinced that the short period of time which is spent in securing lump sum competitive tenders will easily be saved during the progress of the work. Contractors spending their own money can take decisions and get on with the work far more rapidly than contractors operating a target cost contract, subject on every occasion to the approval of the Air Ministry surveyors. In lump sum contracts there is a great saving in clerical work on both sides, and contractors assert that they can get more work out of their men and thus save time and labour.

(b) The Sub-Committee believe that the competitive element which this type of target cost contract seeks to introduce is on too narrow a basis to be of any value. They have been informed that firms quote fees as low as ½ per cent. on the cost of the work and even in some cases offer to do the work without fee. The contracts under review are for sums involving hundreds of thousands of pounds. Contracts of half a million are quite common, and it is this size of contract to which the Sub-Committee are now referring. Yet the competition is limited to a range of, say, between ½ per cent. and 1 per cent. of that sum, £2,500 or £5,000, and it is this narrow margin which is the only competitive factor in deciding the placing of the contract. Presumably the fee, in addition to providing a competitive element, was also intended to cover office overhead charges and to provide some profit for firms whose lack of experience might be expected at first to prevent them earning an appreciable bonus. The fact that contractors are now prepared to accept work on a target cost without a fee, which incidentally renders the penalty provision in the contract futile, shows that the system has outgrown its usefulness.

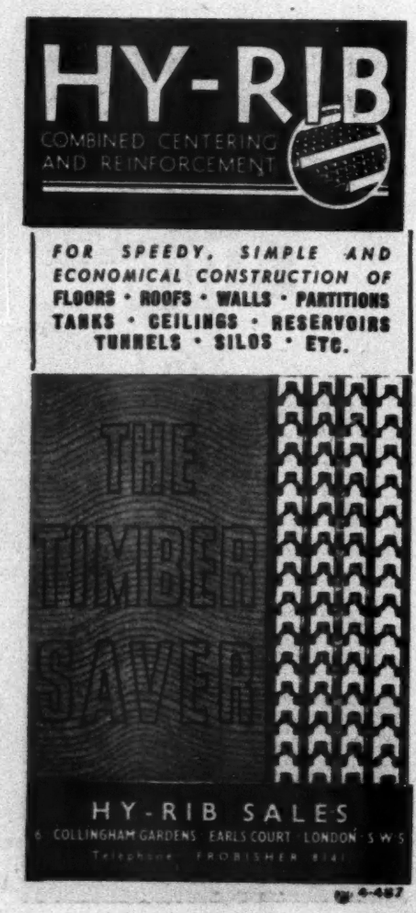
The Sub-Committee cannot accept the arguments in favour of a target cost system. They consider that, from every point of view, the fixed price contract is to be preferred to the target cost contract. They believe that fixed price contracts actually save time in the long run, provide a much better basis of competition and are economical in clerical staff and man hours on the site. They recommend the Air Ministry to return at once to the practice of placing fixed price contracts wherever practicable. They feel very strongly that the Air Ministry were ill advised to resort to the target price system as a general rule.

Progress of Work.

The Sub-Committee have had some evidence on the progress of the work at aerodromes now under construction or in course of extension. It appears that there is a general delay, quite unconnected with weather conditions, and that some contracts are many months behind schedule. The Sub-Committee were informed that a station they visited recently, which it had been hoped to bring into partial operation by the end of last year, would not be finally completed for another six months. On this site there were at work only 500 men, where 1,000 were needed. There was also a great shortage of lorries. The contractors were continuing their efforts to obtain more men and more transport, but they were having little success. Apart from the serious implications of this state of affairs from an operational point of view, working under such conditions is wasteful. The Sub-Committee wish to emphasise the urgency of the situation. There is still a number of aerodromes to be built. They recommend that the Air Ministry should consider the adoption of a policy of strict priority in aerodrome construction. Labour shortage is likely to become more acute. The demands for transport and materials are not likely to grow less, but rather to increase. It seems to the Sub-Committee that, in order to avoid waste, the Ministry might be wise to concentrate upon completing aerodromes and begin work on new sites only where absolutely essential.

Use of Smaller Firms.

It has been suggested to the Sub-Committee by contractors that labour difficulties could be eased by a greater use of the smaller firms as sub-contractors on large contracts. Experience has shown that sections of the work can be organised by the main contractor and let out at firm prices to a number of sub-contractors. In these circumstances the small contractor is doing work to which he is accustomed in ordinary commercial practice and the main contractor bears for him the peculiar difficulties of war conditions. The principle of sub-contracting is widely applied in the manufacture of aircraft and the Sub-Committee are advised that it can be usefully employed in the construction of aerodromes. They understand, however, that the use of this type of sub-contracting is not encouraged by the Air Ministry. It seems to them an altogether desirable way of usefully employing the organisations of many small firms which might otherwise be driven out of business. While they recognise that only established and competent firms should be entrusted with the main contract, they recommend that main contractors should be assisted to sub-contract part of their work.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A.R.P. SCHEMES

LONDON.

Caterham and Warlingham. — U.D.C. authorised Surveyor to proceed with proposed additional cleansing station at Blanchman's Farm estate, Warlingham, at £740, and provide protected accommodation adjoining ambulance station at Caterham, at £240.

Dagenham.—T.C. placed contract with Imperial Welding and Engineering Co. for strengthening of shelters.

Hendon. — Civil Defence Committee received approval of Regional Commissioners to £990 on new building to accommodate Mill Hill report centre.

Leyton.—T.C. approved works at a cleansing station at £120.—Ministry of Home Security approved £1,486 for sleeping accommodation at three depots.

Malden and Coombe.—T.C. placed following contracts: E. and L. Berg, Ltd., at £317 for improvements at first aid post; Aubrey Watson, Ltd., and J. L. Eve Construction Co., Ltd., for extensions to, and erection of Anderson steel shelters.

Romford.—T.C. approved contracts to erect or complete erection of auxiliary fire service action stations.—Regional Commissioner agreed subject to tenders being obtained to re-pointing of 27 50-person shelters with cement mortar in lieu of lime cement mortar.

Woolwich.—B.C. approved contracts with Messrs. Unit Construction Co., Ltd., and Robinson (Gardens), Ltd., for domestic brick shelters, at £1,139 6s.—Subject to Ministry of Home Security, Boro' Eng. to carry out work of heating and ventilating Plumstead Common trenches, at £110 13s., and subject to Ministry, shelter accommodation for 20 personnel at Woolwich Baths be provided by Boro' Eng., at £106 16s.—Boro' Eng. to carry out work of strengthening certain shelters, at £1,034 18s.—Sanders and Forster, Ltd., accepted for necessary steelwork in connection with trench shelters at Parsons Hill and Plumstead Common, at £592 15s.

PROVINCIAL.

Adwick-le-Street.—U.D.C. to erect protective brick walls for blast at Council offices. Plans by W. S. Ellis, Sur.

Blackburn.—T.C. to establish first-line rest centres for 4,000 persons, four second-line centres in cinemas and schools.—Additional shelter accommodation in basements for 800 persons to be provided. Plans by W. Pickstone, Boro' Sur.

Burton-on-Trent.—E.C. proposed strengthening shelters at Council Schools, at £1,750. Plans by G. Moncur, Boro' Eng. and Sur.

Church.—U.D.C. approved plans: shelter to works, Clifton Mill, J. and J. H. Entwistle, Ltd.

Colwyn Bay.—T.C. to erect three additional public shelters—W. Evans, builder, "Rayleigh," Wynn-rd., Old Colwyn, secured contract for six public shelters for T.C. at £1,265. Plans by N. S. Jeffrey, Boro' Sur.

Dukinfield.—T.C. propose reconstruction of all round-roof type shelters. Plans by E. N. Stannion, Boro' Sur.

Eston.—U.D.C. to seek sanction to waterproof 395 communal domestic shelters. Plans by Sur.

Gateshead.—T.C. received sanction to build three shelters in Rock Grove area at £521 10s.

Hebburn.—J. M. Black (Junior), Ltd., Victoria-rd. West, secured contract for 29 school shelters, at £5,160, and also 16 shelters at Clegwell school, at £2,890.—David Glen, Back Queen's-rd., Jarrow, secured contract for waterproofing shelters, at £3,046.

Hucknall.—U.D.C. propose waterproofing Anderson steel shelters.

Ince-in-Makerfield.—E.C. seeking sanction of M.H. to borrow £1,450 for provision and equipment of shelters for elementary schools. Plans by P. Fairclough, Sur.

Irthlingborough.—U.D.C. approved shelter to Excelsior-wks., Norton and Lawman, Ltd.; two shelters to Progressive-wks., J. W. Perkins and Son, Ltd.

Lancaster.—Barrow Bros., builders, Bulk-rd., Lancaster, secured contract for shelters at St. Anne's schools for E.C. Plans by F. Hill, City Eng. and Sur.

Leeds.—Tender of W. Nicholson and Son (Leeds), Ltd., for constructing public shelters at City and Central Railway Stations for £2,452 13s. 3d. and £2,986 3s. 6d. respectively, accepted by T.C., subject to

approval by Ministry. The shelters will accommodate 535 and 873 persons respectively.

Manchester. — T.C. approved: shelter accommodation for ambulant patients at a hospital, at £2,132; decontamination facilities at hospitals, at £400; and sleeping bunks for shelters at Abergele (Children's) sanatorium, £150.

Newcastle-on-Tyne.—City Council to acquire site for further decontamination station. Plans by R. G. Roberts, City Architect, 18, Cloth Market.

Newcastle-under-Lyme.—Tenders approved for approx. 200 shelters in five different types of new design on selected sites.—T.C. propose shelter a tsubstation adjacent to first-aid post. Plans by A. Cotton, Boro' Sur.

Runcorn.—R.D.C. to erect communal shelters at Grappenhall. Plans by A. J. King, Eng. and Sur.

Ryton-on-Tyne.—U.D.C. received consent to build 24 surface shelters at £422.

Scarborough.—Seven additional school shelters available to public outside school hours, to be built, at £1,530.

South Shields.—E.C. to recondition shelters at Cleadon Park junior school at £2,131. Plans by A. G. Richardson, Acting Boro' Eng.

Stretford.—T.C. approved outside shelter to be erected and certain other alterations erected at an A.F.S. station so as to afford personnel adequate protection against blast. —Accommodation at another A.F.S. station also to be improved.

Wallsend.—T.C. to build decontamination centre at infirmary. Plans by J. A. Blench, Boro' Sur.

Walthamstow.—T.C. to provide shelter at Howard College, at £172 2s.

York.—E.C. to instal lighting in school shelters.

SCOTLAND.

Glasgow.—Plans prepared by T. Somers, municipal buildings and shelters at Millroad.

CONTRACTS OPEN

For some contracts still open, but not included in this list, see previous issues. Those with an asterisk are advertised in this number. The dates at the head of paragraphs are those for the submission of tenders: a dagger (†) denotes closing date for applications; the name and address at the end refer to the person from whom particulars may be obtained.

BUILDING.

APRIL 11.

Durham C.C.—Air raid shelters at various schools, mainly in South-Western part of county. F. Willey (F.), 34, Old Elvet, Durham.

APRIL 14.

Coseley U.D.C.—Waterproof concrete linings and erection of extension sheets for Anderson shelters. G. Edwin Mitchell, Eng. and Sur.

Coseley U.D.S.—Office at Green-street., to Edwin Mitchell, Eng and Sur.

Luton T.C.—Repairs of houses. F. Oliver, Boro. Eng. and Sur.

Montgomery C.C.—Repairs to a scullery and laundry. I. Owen Jones, Public Assistance Officer, Welshpool. Dep. £2 2s.

Worksop T.C.—Underground strong room, Town Hall, and Municipal Restaurant, Cheapside. Boro. Eng. Park House. Dep. £2 2s each contract.

APRIL 15.

Bury T.C.—School canteen and cooking centre. Boro. Eng., Bank-st. Dep. 10s.

Carmarthen T.C. — Fire station with two attached houses and construction of approach roads. G. L. Ovens, Boro' Eng. and Sur.

Clacton U.D.C.—105 public surface shelters W. Aieton, Sur.

Nottinghamshire C.C.—Wards at Kilton Hill County Hospital. County Architect, Nottingham. Dep. £1 1s.

St. Albans T.C.—Communal surface shelters in the Sopwell-la./Albert-st. area. F. T. Negus, City Eng. and Sur., 38, St. Peter's-st. Dep. £1 1s.

Stourbridge T.C. — Decontamination laundry. G. N. Maynard, Boro. Eng. and Sur. Dep. £2 2s.

APRIL 16.

Frome U.D.C. — Extension of the fire station. H. J. Allard, clerk. Dep. £2 2s.

Glamorgan C.C.—Works at Glynneath police station. D. J. Parry, Deputy Clerk, County Hall, Cardiff.

APRIL 17.

Dundalk.—New Presbytery at St. Patrick's Church for Rev. John F. Stokes, Administrator. Wm. H. Byrne and Son, architects, 20, Suffolk-st., Dublin. Dep. £3 3s.

Leeds T.C.—Electric lighting installation to dormitory shelters at emergency food and rest centres. W. S. Cameron, City Eng.

APRIL 18.

Erith T.C.—3 brick and concrete shelters for protected sleeping accommodation at rest centres. J. H. Clayton, Boro. Eng. and Sur. Dep. £1 1s.

Stourbridge T.C.—Demolition and re-erection of six communal surface shelters, contract 24. G. N. Maynard, Boro. Eng. and Sur.

APRIL 19.

Ossett T.C.—Strengthening of basements at 16 houses. Boro. Sur. and Eng.

APRIL 21.

Macclesfield T.C.—Extending and improving existing garage accommodation in police yard. Boro. Architect, Pear Tree House, Jordangate.

Ossett T.C.—Sub-station building at pumping station. Boro. Sur.

APRIL 23.

Ludlow R.D.C.—24 houses, including road-making and drainage. J. Brian Cooper (F.), 177, Corporation-st., Birmingham 4. Dep. £2 2s.

APRIL 25.

North Riding C.C.—Catering kitchens at Eston, Grangetown, Sir William Worsley Senior council school and Thornaby "Arthur Head" council school. F. Barraclough, Sec., Education Offices, Northallerton.

APRIL 26.

Bootle T.C.—Reinstatement of parts of Technical College. Boro. Eng.

PAINTING, ELECTRIC LIGHTING, HEATING, &c.

APRIL 11.

Tendring R.D.C.—External painting of 72 houses. S. E. Carroll, Sur

APRIL 14.

Luton T.C.—Installation of electric lighting in about 200 yards of concrete and brick-lined tunnel shelters. F. Oliver, Boro. Eng. and Sur. Dep. £2 2s.

APRIL 15.

Penrith Grammar Schools.—Exterior painting. R. Morton Rigg (L.), architect, Corney-sq.

APRIL 16.

Bath Corporation.—Repairs at 8 to 19, Rivers-pl., Twerton, 2 to 5, Rivers-ter., Weston. Deputy City Eng.

Rochdale C.B.—External painting of 690 houses. Boro. Sur.

Scunthorpe T.C.—Two water basins; one, Station-rd. and other on public abattoir site, near Church-sq. W. Farrar, B.E. and S.

Southport C.B.—Painting structures on foreshore and pier. Boro. Eng. Dep. £1 1s.

FEDERATED EMPLOYERS' INSURANCE ASSOCIATION LTD. ESTABLISHED 1904

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Westmorland E.C.—Water closets, drainage, etc., at Crook council school. A. Knewstubb, architect, St. Andrew's-chmbs., Penrith.

APRIL 17.

Durham C.C.—Outside painting of County police stations and houses. W. J. Marrett, County Sur., Eng. and Architect, 20, Old Elvet, Durham.

APRIL 18.

East Retford R.D.C.—Exterior painting of 47 council houses. L. Tattersfield (L.), Amcott House. Dep. £1 1s.

Middlesbrough T.C.—Internal redecoration of maternity home. P. Kitchen, Town Clerk. Dep. £1 1s.

Wolverhampton Corporation.—Painting of existing pump houses at Cosford Waterworks. Water Engineer and Manager. Dep. £2.

APRIL 19.

Blofield and Flegg R.D.C.—External painting of 201 houses. L. McRoberts, clerk, Council Offices, Acle, Norwich.

APRIL 22.

Docking R.D.C.—External painting of 96 houses and bungalows. J. H. Marshall, clerk.

York T.C.—External painting of municipal houses. Housing and Estates Dept., The Castle.

APRIL 23.

Haverfordwest R.D.C.—Repairs to Glanymor bungalow and Keeston villa, Tiers Cross. W. V. Evans, clerk, 2, Victoria-pl.

York T.C.—Structural repairs at five properties. C. J. Minter, City Eng. Dep. £1 1s.

NO DATE.

Cumberland Infirmary.—Annual painting and cleaning. J. S. Rippier, Secretary-Superintendent, Carlisle.

Wakefield Rural, Stanley and Morley Councils.—Internal decoration of home at Carr Gate isolation hospital. A. Elstone, Clerk, 18, St. John's North, Wakefield.

MATERIALS.

The materials for which tenders are invited normally include one or several of the following:—asphalt, bricks, brooms, building lime, cast-iron pipes, cement, stoneware pipes, granite chippings, granite kerbs, gravel, gulleys, lime, manhole covers, painters' materials, plumbers' materials, road stone, slates, sand, stone, tar, tarsing and bituminous macadam, timber, and whinstone screenings. Readers should obtain full particulars by personal inquiry.

APRIL 18.

Salford T.C.—City Eng.

APRIL 19.

Silsden U.D.C.—Sur.

APRIL 21.

Manchester T.C.—Highways Dept., Town Hall.

APRIL 23.

Glasgow T.C.—Paints, etc. General Manager, 46, Bath-st.

APRIL 26.

Haltemprice U.D.C.—C. R. Butcher, Eng. and Sur., Anlaby House, Anlaby.

ENGINEERING, IRON AND STEEL.

APRIL 15.

West Dean R.D.C. — Covered concrete storage reservoir and provision, laying and jointing of about 640 lin. yds. of 8 in. dia. iron and steel delivery mains, together with fittings and other incidental works. Willcox, Raikes and Marshall, engineers, 33, Great Charles-st, Birmingham, 3. Dep. £5 5s.

APRIL 19.

Glyncorrwg U.D.C.—Brick service reservoir with filter beds and chlorination house, also 50 tons of 6 in. spigot and socket cast-iron pipes and specials. Chairman, Council Offices, Cymmer. (2 contracts.) Dep. £2 and £1 respectively.

ROAD, SEWERAGE AND WATER WORKS.

APRIL 14.

Colwyn Bay T.C.—Road surface dressing, supply of refined tar bituminous compounds, granite and limestone chippings. N. S. Jeffrey, Boro. Eng. and Sur.

APRIL 16.

South-East Cornwall Water Board.—Construction and maintenance of about 2 miles of 4 in. spun-iron and steel water mains, together with valves, fittings and appurtenant works. Lemon and Blizard, engineers, 24, Lockyer-st., Plymouth. Dep. £3 3s.

West Hartlepool C.B.—Construction of Brafferton-st. — Roseberry-rd. westwards. Francis Durkin, Boro. Eng. Dep. £5.

APRIL 19.

Manchester T.C.—Temporary road off Altrincham-rd., Sharston, Wythenshawe. City Engineer's Office, Wythenshawe District Surveyor's Dept., Town Hall. Dep. £1 1s.

RATES OF WAGES IN THE BUILDING TRADE

AS AND FROM 1st FEBRUARY, 1941

[Every endeavour is made to ensure accuracy, but we cannot be responsible for errors]

	Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.		Crafts-men.	Lab-ourers.
Aberavon	1/10	1/5½	Clitheroe	1/10	1/5½	Isle of Thanet	1/8	1/3½	Saxmundham	1/6½	1/2½
Aberdare	1/10	1/5½	Cobham (Surrey)	1/9	1/4½	Isle of Wight	1/7½	*1/3½	Scarborough	1/9½	1/4½
Abergavenny	1/10	1/5½	Colchester	1/9½	1/4½	Keighley	1/10	1/5½	Scunthorpe	1/10	1/5½
Abingdon	1/8½	1/4	Colwyn Bay	1/9	1/4½	Kenilworth	1/10	1/5½	Selby	1/10	1/5½
Accrington	1/10	1/5½	Congleton	1/9½	1/4½	Kettering	1/10	1/5½	Sevenoaks	1/8½	1/4
Aldeburgh	1/6½	1/2½	Coventry	1/10	1/5½	Kidderminster	1/9½	1/4½	Sheerness	1/8	1/3½
Aldershot	1/8	1/4	Cranbrook	1/8	1/3½	King's Lynn	1/8	1/3½	Sheffield	1/10	1/5½
Alfreton	1/10	1/5½	Cranleigh	1/8	1/3½	Kirkham	1/10	1/5½	Shipley	1/10	1/5½
Alnwick	1/9½	1/4½	Crawley	1/8	1/3½	Knowle	1/9½	1/4½	Shoeburyness	1/9½	1/4½
Altrincham	1/10	1/5½	Crewe	1/9½	1/4½	Lancaster	1/10	1/5½	Shoreham	1/9	1/4½
Amble	1/9½	1/4½	Cromer	1/7	1/3	Leamington	1/10	1/5½	Shrewsbury	1/9½	1/4½
Amersham	1/8½	1/4	Crowborough	1/8	1/3½	Leatherhead	1/9	1/4½	Sittingbourne	1/8	1/3½
Ammanford	1/10	1/5½	Cuckfield	1/8	1/3½	Leeds	1/10	1/5½	Skegness	1/9	1/4½
Andover	1/8	1/3½	Darlington	1/10	1/5½	Leicester	1/10	1/5½	Sleaford	1/8½	1/4
Ardingley	1/8	1/3½	Darwen	1/10	1/5½	Leighton Buzzard	1/7	1/3	Slough	1/9	1/4½
Arundel	1/8	1/3½	Daventry	1/8½	1/4	Letchworth	1/9	1/4½	Southampton	1/9½	1/4½
Ascot	1/8	1/3½	Deal	1/8	1/3½	Lewes	1/8	1/3½	Southend-on-Sea	1/9½	1/4½
Ashby-de-la-Zouch	1/10	1/5½	Denbigh	1/9	1/4½	Lichfield	1/9	1/4½	Southport	1/10	1/5½
Ashford (Kent)	1/8	1/3½	Derby	1/10	1/5½	Lincoln	1/10	1/5½	South Shields	1/10	1/5½
Ashford (Middlesex)	1/10	1/5½	Devizes	1/7	1/3	Littlehampton	1/8	1/3½	Spalding	1/8	1/3½
Ashington	1/9½	1/4½	Dewsbury	1/10	1/5½	Liverpool	‡§2/-	¶	Stafford	1/9½	1/4½
Ashtead	1/10	1/5½	Didcot	1/8	1/3½	Llandudno	1/9	1/4½	Staines	1/9	1/4½
Ashton-under-Lyne	1/10	1/5½	Diss	1/6½	1/2½	Llanelly	1/10	1/5½	Stamford	1/9	1/4½
Aylesbury	1/8	1/3½	Doncaster	1/10	1/5½	London—			Stevenage	1/9	1/4½
Aylsham	1/7	1/3	Dorchester	1/7½	1/3½	12m. radius	•1/11½	1/6½	Stockport	1/10	1/5½
Bagshot	1/8	1/3½	Dorking	1/8½	1/4	12-15 m. radius	•1/11	1/6	Stockton-on-Tees	1/10	1/5½
Banbury	1/8	1/3½	Dover	1/8	1/3½	Long Eaton	1/10	1/5½	Stoke-on-Trent	1/10	1/5½
Barnsley	1/10	1/5½	Dovercourt	1/8	1/3½	Longton	1/10	1/5½	Stourbridge	1/10	1/5½
Barnstaple	1/8	1/3½	Driffield	1/8½	1/4	Loughborough	1/10	1/5½	Stourport	1/9½	1/4½
Barrow-in-Furness	1/10	1/5½	Droitwich	1/9½	1/4½	Louth	1/8½	1/4	Stowmarket	1/7	1/3
Barry	1/10	1/5½	Dudley	1/10	1/5½	Lowestoft	1/8	1/3½	Stratford-on-Avon	1/9	1/4½
Basingstoke	1/8	1/3½	Dunstable	1/8½	1/4	Luton	1/9½	1/4½	Stroud	1/9	1/4½
Bath	1/9½	1/4½	Durham City	1/10	1/5½	Macclesfield	1/9½	1/4½	Sunderland	1/10	1/5½
Batley	1/10	1/5½	Eastbourne	1/9	1/4½	Maidenhead	1/9	1/4½	Sutton Coldfield	1/10	1/5½
Beaconsfield	1/8½	1/4	E. Glam. (Mon. Val.)	1/10	1/5½	Maidstone	1/8½	1/4	Swaffham	1/6½	1/2½
Beccles	1/6½	1/2½	East Grinstead	1/8	1/3½	Malvern	1/8½	1/4	Swanage	1/8	1/3½
Bedford	1/9½	1/4½	Edenbridge	1/8	1/3½	Manchester	1/10	1/5½	Swansea	1/10	1/5½
Berkhamsted	1/8	1/3½	Ely	1/7	1/3	Manningtree	1/7	1/3	Swindon	1/8½	1/4
Berwick	1/9½	1/4½	Epping	1/10	1/5½	Mansfield	1/10	1/5½	Tamworth	1/9½	1/4½
Beverley	1/10	1/5½	Exeter	1/9½	1/4½	March	1/7	1/3	Taunton	1/8½	1/4
Bexhill-on-Sea	1/8½	1/4	Exmouth	1/8½	1/4	Margate	1/8	1/3½	Tenterden	1/8	1/3½
Bideford	1/8	1/3½	Fakenham	1/7	1/3	Market Harborough	1/9	1/4½	Thames Haven	1/10	1/5½
Biggleswade	1/8	1/3½	Falmouth	1/8½	1/4	Matlock	1/8½	1/4	Thetford	1/7½	1/3½
Billericay	1/7½	1/3½	Fareham	1/9	1/4½	Melton Constable	1/6½	1/2½	Thorpe Bay	1/9½	1/4½
Birchington	1/8	1/3½	Faversham	1/8	1/3½	Melton Mowbray	1/9	1/4½	Todmorden	1/10	1/5½
Birkenhead	‡§2/-	¶	Felixstowe	1/9	1/4½	Merthyr	1/10	1/5½	Tonbridge	1/8½	1/4
Birmingham	†1/10	†1/5½	Filey	1/8½	1/4	Middlesbrough	1/10	1/5½	Torquay	1/9½	1/4½
Bishop Auckland	1/10	1/5½	Fleetwood	1/10	1/5½	Middleton	1/10	1/5½	Totnes	1/8	1/3½
Bishops Stortford	1/9	1/4½	Flint	1/10	1/5½	Middlewich	1/9½	1/4½	Trowbridge	1/7	1/3
Blackburn	1/10	1/5½	Folkestone	1/8	1/3½	Milford Haven	1/8½	1/4	Truro	1/7½	1/3½
Blackpool	1/10	1/5½	Frinton-on-Sea	1/8	1/3½	Morecambe	1/10	1/5½	Tunbridge Wells	1/8½	1/4
Blyth	1/10	1/5½	Frome	1/7	1/3	Morley	1/10	1/5½	Uppingham	1/8½	1/4
Bognor Regis	1/8	1/3½	Gainsborough	1/9	1/4½	Mundesley	1/7	1/3	Uttoxeter	1/8½	1/4
Bolton	1/10	1/5½	Gateshead	1/10	1/5½	Nantwich	1/9½	1/4½	Wakefield	1/10	1/5½
Bournemouth	1/9	1/4½	Gillingham (Kent)	1/9	1/4½	Nelson	1/10	1/5½	Walsall	1/10	1/5½
Bracknell	1/8	1/3½	Glossop	1/10	1/5½	Newark-on-Trent	1/9½	1/4½	Walsden	1/10	1/5½
Bradford	1/10	1/5½	Gloucester	1/9½	1/4½	Newbury	1/8	1/3½	Walton-on-Naze	1/8	1/3½
Bradford-on-Avon	1/7	1/3	Godalming	1/8	1/3½	Newcastle-on-Tyne	1/10	1/5½	Ware	1/9½	1/4½
Braintree	1/8	1/3½	Goole	1/10	1/5½	Newcastle-u.-Lyme	1/10	1/5½	Warminster	1/7	1/3
Brentwood	1/9½	1/4½	Gosport	1/9½	1/4½	New Forest	1/8	1/3½	Warrington	1/10	1/5½
Bridgwater	1/8½	1/4	Grantham	1/9	1/4½	Newmarket	1/8	1/3½	Warwick	1/10	1/5½
Bridlington	1/9½	1/4½	Gravesend	1/9½	1/4½	Newport, Mon.	1/10	1/5½	Wellingborough	1/9½	1/4½
Brighouse	1/10	1/5½	Great Yarmouth	1/8	1/3½	Newport Pagnell	1/8	1/3½	Welwyn	1/9	1/4½
Brighton	1/9	1/4½	Grimsby	1/10	1/5½	Northampton	1/10	1/5½	Welwyn Gar. City	1/10	1/5½
Bristol	1/10	1/5½	Guildford	1/8	1/3½	Norwich	1/10	1/5½	Wells (Norfolk)	1/6½	1/2½
Broadstairs	1/8	1/3½	Guilsborough	1/8½	1/4	Nottingham	1/10	1/5½	West Bromwich	1/10	1/5½
Bromsgrove	1/9½	1/4½	Halifax	1/10	1/5½	Nuneaton	1/10	1/5½	Westcliff-on-Sea	1/9½	1/4½
Buckley	1/10	1/5½	Hanley	1/10	1/5½	Oakham	1/8½	1/4	Weston-super-Mare	1/9	1/4½
Bungay	1/6	1/2½	Harpenden	1/9	1/4½	Oldham	1/10	1/5½	Weybridge	1/9	1/4½
Burnham-on-Crouch	1/6½	1/2½	Harrogate	1/10	1/5½	Ormskirk	1/10	1/5½	Weymouth	1/8	1/3½
Burnley	1/10	1/5½	Hartlepools	1/10	1/5½	Oxford	1/9½	1/4½	Whitby	1/9	1/4½
Burnham	1/10	1/5½	Harwich	1/8	1/3½	Oxted	1/8½	1/4	Whitstable	1/8	1/3½
Burton-on-Trent	1/10	1/5½	Haslemere	1/8	1/3½	Paignton	1/9½	1/4½	Widnes	1/10	1/5½
Bury	1/10	1/5½	Hastings	1/8	1/3½	Peterborough	1/9½	1/4½	Wigan	1/10	1/5½
Bury St. Edmunds	1/7½	1/3½	Hatfield	1/9½	1/4½	Plymouth	1/10	1/5½	Wigton	1/8½	1/4
Buxton	1/9½	1/4½	Haywards Heath	1/8	1/3½	Pontefract	1/10	1/5½	Willington	1/10	1/5½
Byfleet	1/8½	1/4	Hednesford	1/9½	1/4½	Pontypridd	1/10	1/5½	Wilmslow	1/10	1/5½
Cambridge	1/10	1/5½	Hemel Hempstead	1/9	1/4½	Port Talbot	1/10	1/5½	Winchester	1/8½	1/4
Canterbury	1/8	1/3½	Henley-on-Thames	1/8	1/3½	Portsmouth	1/9½	1/4½	Windermere	1/8½	1/4
Cardiff	1/10	1/5½	Hereford	1/8	1/3½	Preston	1/10	1/5½	Windsor	1/9	1/4½
Carlisle	1/10	1/5½	Herne Bay	1/8	1/3½	Pulborough	1/8	1/3½	Wisbech	1/7½	1/3½
Carnforth	1/10	1/5½	Hertford	1/9½	1/4½	Ramsgate	1/8	1/3½	Witham	1/8	1/3½
Castleford	1/10	1/5½	Heysham	1/10	1/5½	Reading	1/9½	1/4½	Woking	1/8½	1/4
Caterham	1/10	1/5½	Hitchin	1/9	1/4½	Redditch	1/9½	1/4½	Wokingham	1/8	1/3½
Chard	1/7	1/3	Hoddesdon	1/9½	1/4½	Redhill	1/8½	1/4	Wolverhampton	1/10	1/5½
Chatham	1/9	1/4½	Holt (Norfolk)	1/6½	1/2½	Ripon	1/8½	1/4	Woodbridge	1/7½	1/3½
Chelmsford	1/9½	1/4½	Horley	1/8	1/3½	Rochdale	1/10	1/5½	Worcester	1/9½	1/4½
Cheltenham	1/9	1/4½	Horsham	1/8	1/3½	Rochester	1/9	1/4½	Workington	1/8½	1/4
Chepstow	1/9½	1/4½	Horwich	1/10	1/5½	Rugby	1/10	1/5½	Worksop	1/9½	1/4½
Chertsey	1/9	1/4½	Huddersfield	1/10	1/5½	St. Albans	1/9½	1/4½	Worthing	1/8	1/3½
Chester	1/10	1/5½	Hull	1/10	1/5½	St. Helens	1/10	1/5½	Wrexham	1/9½	1/4½
Chesterfield	1/10	1/5½	Hunstanton	1/7	1/3	St. Neots	1/7½	1/3½	Wroxham	1/7½	1/3½
Chichester	1/8	1/3½	Huntingdon	1/7½	1/3½	Saffron Walden	1/7	1/3	Wycombe	1/9	1/4½
Chorley	1/10	1/5½	Ilfracombe	1/8	1/3½	Salisbury City	1/7½	1/3½	Wymondham	1/7	1/3
Cirencester	1/7½	1/3½	Ingatestone	1/8½	1/4	Salisbury Plain	1/9	1/4½	Yeovil	1/8½	1/4
Clacton	1/8	1/3½	Ipswich	1/9½	1/4½	Sawbridgeworth	1/8½	1/4	York	1/10	1/5½
Cleveleys	1/10	1/5½									

* Painters 1d. less than other Craftsmen. † Plus 2d. per working day. ‡ Plasterers 2/0½

¶ Tradesman's Labourers, 1/6½. Navvies and General Labourers 1/5½.

§ Joiners, Plumbers, Bricklayers, Tilers and Masons receive 2/- per week or 4d. per day Tool Money.

Note: Carpenters and Joiners in all Towns and Districts (other than Birkenhead and Liverpool) receive 2d per day Tool Allowance

For Building Trade Wages in Scotland, see page 374

PRICES CURRENT OF MATERIALS*

Note: Owing to the exceptional circumstances which prevail at the present time prices of materials should be confirmed by inquiry. The prices of soft woods are for cash on delivery.

At present linseed oil and genuine spirits of turpentine can only be supplied in cans in small quantities.

BRICKS, &c.

The price for Stock Bricks has been altered to minimum price at works for full lorry loads. Sittingbourne district. A quotation for cartage should be obtained as the haulage question is difficult.

	£ s. d.
First Hard Stocks ..... per 1,000	£4 5 6
Second Hard Stocks ..... "	3 18 6
Mild Stocks ..... "	3 5 6
Single Rough Stocks ..... "	2 19 6
Third Common Stocks ..... "	2 10 0

	King's Cross Station	To sites in W.C. District.
2½ in. Phorpres. A discount of 6d. per 1,000 only monthly account.	per 1,000.	per 1,000
	s. d.	s. d.
Pressed	51 9	58 3
Keyed	53 9	60 3
Single Bullnose	71 9	78 3
Rustics	71 9	78 3
Whites	72 3	78 3
White Midhurst Facing Bricks (delivered London site)	£ s. d. 3 12 6	
Best blue Pressed Staffs. (London Stns.) ..	10 2 0	
Do. Bullnose (London Stns.)	10 12 0	
Blue Wire Cuts (London Stns.)	8 19 6	
Best Stourbridge Fire Brick (London Stns.) :—		
2½ in. 9 3 6	3 in.	11 1 0
GLAZED BRICKS. (London Stns.)		
Best White Ivory and Salt Glazed Stretcher 28 0 0	D'ble Str'tch'rs ..	36 10 0
	D'ble Headers ..	33 10 0
	One side&two ends	37 10 0
Headers 27 10 0	Two sides&one end	38 10 0
Quoins, Bullnose and 4½ in. Flats 34 10 0	Splays and Squints	36 0 0

Second Quality, £2 per 1,000 less than best. Cream and buff, £2 extra over white. Other colours. Hard Glaze, £5 10s. extra over white.

PARTITION SLABS.

Delivered London Area.

"PHORPRES" HOLLOW PARTITION BLOCKS.			
2" per yd. sup.	2 3	3" per yd. sup.	2 9
2½ " "	2 6	4" "	3 1
CLINKER CONCRETE.			
2" per yd. sup.	1 6	3" per yd. sup.	2 0
2½ " "	1 8	4" "	2 4
CRANHAM TERRA COTTA.			
2" per yd. sup.	3 0	3" per yd. sup.	3 8
2½ " "	3 6	4" "	4 7
HEMPSTEAD—KEYED TWO SIDES.			
12" x 9" x 2"	2 6	12" x 9" x 3"	3 0
12" x 9" x 2½"	2 9	12" x 9" x 4"	3 9

Per yard super d/d. Free on site, London.

SAND.

Thames Ballast	8	6 per yd.
Pit Ballast	8	6 " "
Pit Sand	10	0 " "
Washed Sand	13	0 " "
¾ in. Shingle	8	0 " "
¾ in. Broken Brick	12	6 " "
Pan Breeze	8	3 " "

delivered 2 miles radius Paddington.

CEMENT.

Best British Portland Cement. Standard Specification. delivered London Area.

	£ s. d.
4 ton loads and upwards site ..... Per ton	2 9 6
1 ton to 4 tons site	2 12 6
Alongside Vauxhall in 80 ton lots	2 7 0
"Ferrocrete" Rapid Hardening Cement—	
4 ton loads and upwards site	2 15 6
1 ton to 4 tons site	2 18 6
Alongside Vauxhall in 80 ton lots	2 13 0

Stored in Reserved Bins at works. 1/6 per ton extra.

"Aquacrete" Water Repellent, "Blue Circle" cement, 30/- per ton extra on ordinary "Blue Circle" prices.

"Colorcrete" Nos. 1 and 2. Coloured Rapid Hardening Portland Cement 3 19 6

"Colorcrete" not rapid hardening, according to colour, from £7 to £15 10s. per ton.

"Snowcrete" White Portland Cement 10 5 0

Super Cement (Waterproof), *bags extra* 3 19 6

NOTE.—Paper bags will be charged at the rate of 6/- nett per ton. Jute sacks charged 1s. 9d. nett each and 1/6 nett each allowed if returned to works within two weeks, in good condition.

Carriage will be paid by makers on returned empty jute sacks.

Roman Cement	£8 0	Keene's Cement, White	£7 0 0
Parian Cement	7 0	" Pink	6 10 0

Cementone Colours for cement according to tints per cwt. from £2 16s. 0d.

PLASTER.

	£ s. d.		£ s. d.
Coarse, Pink	4 0 0	Sirapite, Coarse ..	4 5 6
" White ..	4 7 6	" Finish ..	4 13 6
Pioneer	4 5 0		

Above prices for 4-ton loads and over London Area.

Best Ground Blue Lias Lime	3 0 6	Grey Stone Lime Chalk Lime	2 14 6
Granite Chippings	1 15 0	Hair per cwt. ..	2 7 6

NOTE.—Sacks are charged 1s. 9d. each, and credited 1s. 6d., if returned in good condition within three months, carriage paid.

Stourbridge Fireclay in paper bags, £2 12 6 in 6-ton lots at railway depot.

STONE.

	s. d.
BATH STONE.—Delivered in railway trucks at Westbourne Park, Paddington, G.W.R., or South Lambeth, G.W.R., per ft. cube	3 3½
BEER STONE—RANDOM BLOCK—	
Free on rail at Seaton Station .. per ft. cube	2 3
Delivered free on rail Nine Elms, S.R. "	3 1½

Selected approximate size one way, 1d. per cubic ft. extra, selected approximately three sizes or for special work, 3d. per cubic ft. extra.

PORTLAND STONE—	s. d.
Brown Whitbed, in random blocks of 20 ft. average, delivered in railway trucks at Nine Elms, S. Rly., South Lambeth Station, G.W.R., and Westbourne Park, Paddington, G.W.R., per ft. cube	4 7
Do. do. delivered on road waggons as above stations, per ft. cube	4 7
White basebed, 3d. per ft. cube extra.	
NOTE.—1d. per ft. cube extra for every ft. over 20 ft. average and ¼d. beyond 30 ft.	
HOPTON-WOOD STONE—	
F.O.R. Quarries, Wirksworth, Derbyshire, Random blocks from 10 ft. and over P.ft.cb.	13 2
Sawn two sides	26 11
Sawn three or four sides	31 11
YORK STONE, BLUE—*Robin Hood Quality.* Delivered at any Goods Station, London.	
6 in. sawn two sides landings to sizes (under 30 ft. super) ..... per ft.super	5 6
6 in. rubbed two sides, ditto .... "	6 3
3 in. sawn two sides slabs (random sizes) ..... "	2 7
2 in. to 2½ in. sawn one side slabs (random sizes) (paving) ..... "	1 8½
1½ in. to 2 in. ditto ..... "	1 4½
HARD YORK—	
Delivered at any Goods Station, London.	
Scrappied random blocks. ..... per ft.cube	6 10
6 in. sawn two sides landings to sizes (under 40 ft. super) ..... per ft.super	5 7½
6 in. rubbed two sides, ditto .... "	6 9
4 in. sawn two sides slabs (random sizes) ..... "	3 5
3 in. ditto ditto ..... "	2 8
2 in. self-faced random flags ..... per yd.super	8 9

CAST STONE.

Delivered in London area in full van loads, per ft. cube: Plain, 7s. 6d. Moulded, 8s. 6d. Sills, 10s. 0d.

HARD WOOD.

1 INCH AND UP THICK.

Average price for prime quality.	£ s. d.
Dry Austrian Wainscot, per ft. cube	0 17 0
Dry American and/or Japanese Figured Oak, per ft. cube ..... 10 6 to	0 13 0
Dry American and/or Japanese plain Oak, per ft. cube	0 11 6
Dry sq. edged Honduras Mahogany, per ft. cube	0 15 0
Dry log-cut Honduras Mahogany, per ft. cube ..... 12 6 to	0 16 0
Dry Cuba Mahogany, per ft. cube	0 18 0
Dry Teak, per ft. cube	0 14 0
Dry American Whitewood, per ft. cube	0 10 6
Dry Australian Walnut, per ft. cube	0 19 0
Dry Queensland Silky Oak, per ft. cube	0 12 6
Dry African Mahogany, per ft. cube	0 10 0
Dry African Whitewood, per ft. cube	0 8 0
Dry English Wainscot Oak, per ft. cube	0 16 0
Best Scotch Glue, per cwt.	3 0 0
Liquid Glue, per cwt. ..... 4 7 0 to	5 10 0

SOFT WOOD.

MERCHANTABLE BRITISH COLUMBIAN PINE.

	Minimum. £ s. d.	Maximum. £ s. d.
Scantlings in imported sizes, 2 in. by 3 in. to 4 in. by 11 in.	43 10 0	53 0 0

SITE INSPECTIONS

WE VISIT SITES AND ADVISE ON FOUNDATIONS

★

PILING & CONSTRUCTION COMPANY LIMITED

45, WORCESTER RD., SUTTON, SURREY
TELEPHONE: VIGILANT 0081/2
WORKS: TRICKET CRESCENT, SUTTON

33-61

PLANED BOARDS.

PRIME CLEAR BRITISH COLUMBIAN PINE.

	Per standard. £ s. d.
1 in. by 11 in. } 1 in. by 9 in. }	67 10 0

	Per square. s. d.
1 in. plain edge flooring	53 0
1¼ in. ditto	66 6
1 in. tongued and grooved	53 0
1¼ in. ditto	66 6

MATCHING.

	Per square. s. d.
⅞ in.	37 6
¾ in.	42 0
1 in.	55 0

SLATES.

First quality slates from Penrhyn or Portmadoc, carriage paid in full truck loads to London Rate Station. Per 1,000 actual.

	£ s. d.		£ s. d.
24 by 12	39 7 6	18 by 10	21 15 0
22 by 12	33 0 0	18 by 9	20 0 0
22 by 11	30 5 0	16 by 10	19 0 0
20 by 12	29 10 0	16 by 8 ?...	15 5 0
20 by 10	27 2 6		

TILES.

Delivered at London rate stations in full truck loads of not less than 6 tons ..... Per 1,000 f.o.r. London

	£ s. d.
Best machine-made tiles from Broseley or Staffordshire district.	£5 10 0
Ditto hand-made ditto	6 10 0
Ornamental ditto	6 15 0
Hip and valley tiles { Hand-made	0 11 6
(per dozen) { Machine-made	0 11 0

METALS.

JOISTS, GIRDERS, &c., TO LONDON STATION PER TON—	£ s. d.
R.S. Joists, cut and fitted	£22 10 0
Plain Compound Girders	25 0 0
" Stanchions	27 10 0
In Roof Work	32 10 0

NOTE.—These prices are for standard pieces and not special pieces of an awkward nature.

MILD STEEL ROUNDS.—To London Stations, per ton.

Diameter.	£ s. d.	Diameter.	£ s. d.
¼ in.	22 5 0	½ in. to ¾ in.	20 15 0
⅜ in.	21 5 0	⅞ in. to 2½ in. ..	20 5 0

WROUGHT TUBES AND FITTINGS.

Deliveries from works.

Deliveries from London stock further 2½% gross.

	Tubes. ½"/6" %	Tubulars. ½"/6" %	Fittings. and 10/17 19/24 %	Flanges. ½"/2" %	2½"/6" %
Light weight ..	55½	—	48	51½	58
Heavy weight	48½	48½	40½	41½	50½
Galv.lightweight	44½	—	39½	40½	49½
Galv.heavyweight	35½	35½	31½	30½	41½

Tubes and tubulars sizes ½"/1" inclusive, charged extra of 5% less gross.

Fittings. Figs. 25/34 5% less gross discount.

Terms.—Nett cash end of month following date of invoice. Carriage paid on lots of £10 nett value and over.

C.I. HALF-ROUND GUTTERS.—London Prices ex Works. per yd. in 6 ft. lengths.

	Gutters.	Nozzles.	Stop ends.
3 in.	1/4½	1/1	4d.
3½ in.	1/5½	1/2½	4d.
4 in.	1/6½	1/4½	6½d.
4½ in.	1/8½	1/8	7½d.
5 in.	1/10½	1/11½	8d.

O.G. GUTTERS.

3 in.	1/9	1/5½	4½d.
3½ in.	1/11½	1/5½	6d.
4 in.	1/11½	1/6½	7d.
4½ in.	2/0½	1/9½	8d.
5 in.	2/6	2/0½	9½d.

RAIN WATER PIPES.

Per yd. in 6 fts.	Pipe.	Bends. Stock angles.	Branches.
2 in.	2/0½	1/4½	2/0
2½ in.	2/1½	1/6½	2/4½
3 in.	2/7½	1/11½	2/10½
3½ in.	3/1	2/2½	3/4½
4 in.	3/6½	2/9½	4/0½

NETT PRICES.

Tonnage allowance—4-ton lots, 5 per cent.
2-ton lots, 2½ per cent.

L.C.C. COATED SOIL PIPES.—London Prices, ex Stock.

Per yd. in 6 fts.	Pipe.	Bends.	Branches.
2 in.	3/4½	2/4½	2/10½
2½ in.	4/0½	2/7½	3/7½
3 in.	4/4½	2/10½	4/3½
3½ in.	4/5½	3/7½	5/0½
4 in.	4/10	4/0½	5/9½

L.C.C. COATED DRAIN PIPE.

	Pipe.	Bends.	Branches.
3 in. per yd. in 9 fts.	5/5	6/3	9/11
cwt. qr. lbs.			
4 in. 1 1 20. ..	7/11	7/1	12/6
5 in. 1 2 22. ..	9/7	12/9	19/3
6 in. 2 0 0	11/5	14/8	25/6

Gaskin, 75/- per cwt.

* The information given on this page has been specially compiled for THE BUILDER, and is copyright. The aim in this list is to give, as far as possible, the average prices of materials, not necessarily the highest or lowest. Quality and quantity obviously affect prices—a fact which should be remembered by those who make use of this information. Prices are subject to 2½ per cent. cash discount.

PRICES CURRENT OF MATERIALS—(cont.)

	Per ton Lons in London. £ s. d.		£ s. d.
IRON.—Staffordshire Crown, Merchant quality	17 2 6	to	18 7 6
IRON.—Staffordshire Marked Bars	20 0 0	to	22 0 0
Mild Steel Bars	19 12 0	to	21 2 0
Mild Steel Hoops	21 6 0	to	21 16 0
	Ex Merchant's Stock, per ton (two-ton lots).		
Soft Steel Sheets, C.R. and C.A.—			
20 gauge	24 17 6	to	27 5 0
24 gauge	25 2 6	to	27 0 0
26 gauge	25 17 6	to	27 15 0
Galvanised Corrugated Sheets, 6 ft. to 9 ft.—			
20 gauge	27 1 3	to	28 6 3
24 gauge	27 11 3	to	28 16 3
26 gauge	28 16 3	to	30 11 3
Galvanised Flat Sheets, C.R. and C.A.—			
20 gauge	28 11 3	to	30 8 9
24 gauge	29 1 3	to	30 18 9
26 gauge	30 6 3	to	32 3 9
	Per ton. £ s. d.		£ s. d.
Cut Nails, 3 in. and up	26 0 0	to	27 10 0

ALL NETT.

METAL WINDOWS.—Standard sizes, suitable for complete houses, including all fittings, painting two coats, and delivery to job, average price about 1s. 4d. to 1s. 7d. per foot super.

COPPER.

Seamless copper tubes (basis)	per lb.	1/3
Strong sheet	,,	1/6
Thin sheet	,,	1/7
Copper nails	,,	1/8
,, wire	,,	1/6

PLUMBERS' BRASS WORK.

Delivered in London.
Stamped by Met. Water Board.

CRUTCH HEAD S.D. BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
34/-	53/- per doz.

CHROMIUM PLATED TOILET S.D. BIB COCKS FOR IRON. EASY CLEAN.

½ in.	¾ in.
50/-	68/- per doz.

S.D. STOP COCKS FOR IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
37/6	53/-	87/-	202/-	288/-	460/- per doz.

S.D.S. COCKS WITH TWO UNIONS FOR LEAD.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
47/-	75/6	120/-	220/-	360/-	568/- per doz.

DOUBLE NUT BOILER SCREWS.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.	2 in.
5/10	6/9	15/9	27/3	44/-	63/6 per doz.

HEAVY CROYDON BALL VALVES. SCREW IRON.

½ in.	¾ in.	1 in.	1¼ in.	1½ in.
45/-	73/-	120/-	204/-	280/- per doz.

CAPS AND SCREWS.

1½ in.	1¾ in.	2 in.	3 in.	3½ in.	4 in.
10/6	12/9	19/3	34/-	45/-	53/- per doz.

BRASS SLEEVES.

1½ in.	2 in.	3 in.	3½ in.	4 in.
9/9	12/6	22/6	33/-	42/- per doz.

DRAWN LEAD TRAPS WITH BRASS CLEANING SCREWS.

	1½ in.	1½ in.	2 in.	3 in.
8 lb. Lead P.	29/-	33/-	54/-	93/- per doz.
8 lb. Lead S.	34/-	42/-	67/-	120/- ,,

SOLDER.—Plumbers, 1/5. Tinmen's, 1/8. Blow pipe, 1/10 per lb.

PAINTS, &c.

		£ s. d.
Raw Linseed Oil, in drums	per gallon	0 5 4
Boiled Linseed Oil, in drums	,,	0 5 7
Turpentine, in drums (10 gals.)	,,	0 6 0
Genuine Ground English White Lead, per ton (In not less than 5-cwt. casks).		61 0 0

Extra for 1-cwt. kegs over 5-cwt. casks is 2/9 cwt.

GENUINE WHITE LEAD PAINT—
"Father Thames," "Nine Elms," "Park," "Supremus," "St. Paul's," "Morganswyte," "Polaco," "J" Brand, and other best brands (in 14-lb. tins) not less than 5-cwt. lots, per ton delivered £ s. d. 83 10 0

Red Lead, Dry (packages extra)	per ton	52 0 0
Best Linseed Oil Putty (1 ton lots)	per cwt.	0 17 1½
Size. XD quality	1kn.	0 3 6

Turpentine substitute can be obtained and prices vary according to the quality from 3/- gallon upwards.

		£ s. d.
SHOWCHE CEMENT PAINT	per cwt.	2 16 0
C.M.C. CAMOUFLAGE PAINT	,,	2 16 0

VARNISHES, &c.

		Per gallon.
Oak Varnish	Outside	0 14 0
Fine do.	,,	0 16 0
Fine Copal	,,	0 18 0
Pale Copal	,,	1 0 0
Pale Opal Carriage	,,	1 4 0
Best do. do.	,,	1 12 0
Floor Varnish	Inside	0 18 0
Fine Pale Paper	,,	0 18 0
Fine Copal Cabinet	,,	1 2 0
Fine Copal Flatting	,,	1 0 0
Hard Drying Oak	,,	0 18 0
Fine Hard Drying Oak	,,	0 19 6
Fine Copal Varnish	,,	1 0 6
Pale do.	,,	1 12 0
Best do.	,,	1 2 6
Best Japan Gold Size	,,	1 12 6
Best Black Japan	,,	0 10 0
Oak and Mahogany Stain (water)	,,	0 12 0
Brunswick Black	,,	0 7 6
Berlin Black	,,	0 14 0
Knotting (patent)	,,	0 15 0
French and Brush Polish	,,	0 12 0
Liquid Dryers in Terebene	,,	0 9 0
Cuirass Black Enamel	,,	0 7 0

GLASS.

ENGLISH SHEET GLASS IN CRATES OF STOCK SIZES.

ORDINARY GLAZING QUALITY (O.Q.) AND SELECTED GLAZING QUALITY (S.Q.).

PER FOOT SUPER.

In sizes not exceeding 80 in. long or 48 in. wide or 110 united inches.

	O.Q.	S.Q.
18 oz. in 300 ft. cases	2½d.	2¾d.
24 oz. ,, 200 ft. ,,	3½d.	4d.
26 oz. ,, 200 ft. ,,	3½d.	4¼d.
32 oz. ,, 200 ft. ,,	5½d.	6¼d.
24 oz. ,, 300 ft. ,,	3½d.	3¾d.
26 oz. ,, 300 ft. ,,	3¾d.	4½d.
32 oz. ,, 300 ft. ,,	5½d.	6¼d.
18 oz. Obscured Sheet		5½d.
24 oz. Obscured Sheet		6¼d.
Fluted, 21 oz.		9d.
Enamelled, 18 oz.		5½d.
,, 24 oz.		6¼d.

Extra price according to size and substance for squares cut from stock.

ENGLISH ROLLED PLATE AND FIGURED CATHEDRAL, ETC., IN CUT SIZES.

	Per ft.
Rolled plate, ¼ in.	5½d.
Rough cast double rolled, ⅜ in.	6¼d.
Rough cast double rolled, ½ in.	6¾d.
Figured rolled, and Cathedral, white.	6¾d.
Figured rolled and Cathedral, tinted	9¼d.
Rolled Sheet	6d.
Reeded, Broad Reeded, Cross Reeded and Chevron Reeded, ¼ in. thick	0 10½

Rolled plate is the same price as rough cast double rolled.

	Per ft. s. d.
Wire Rolled, ¼ in. thick	0 9½
Wired Cast, ¼ in. thick	0 9½
Georgian Wired Cast	0 10
"Calorex" Sheet, 21 oz.	2 6
,, ,, 32 oz.	4 0
,, Cast, ¼ in. thick	0 10
,, ,, ⅜ in. thick	1 0
,, ,, ½ in. thick	1 2
Non Actinic Glass, ¼ in. thick	0 9½
,, ,, ⅜ in. thick	1 0
,, ,, ½ in. thick	1 2

"VITA" GLASS.

	Per ft. s. d.
"Vita" Plate Glass, about ⅜ thick	
To 7 ft. super	5 0
Over 7 ft. super	7 6
"Vita" Sheet Glass, about 18/20 oz.	2 0
Cathedral "Vita" Glass:	
¼ in. thickness	2 0
⅜ in. ,,	3 0
⅜ in. Georgian Wired "Vita" Glass	3 6

LEAD, &c.

(Delivered in London.)	Per ton. £ s. d.
LEAD.—Sheet, English, 4 lb. and up	34 10 0
Pipe in coils	34 0 0
Soil pipe	39 10 0
Compo pipe	41 5 0

NOTE.—Country delivery, 20/- per ton extra, lots under 3 cwt. 4/- per cwt. extra and over 3 cwt. and under 5 cwt., 2/6 per cwt. extra. Cut to sizes, 4/- per cwt. extra.

Old lead, ex London area, at Mills. per ton £18 0 0.

BUILDING TRADE WAGES IN SCOTLAND

Following are grade rates authorised by the Scottish N.J.C. from February 1. Every endeavour is made to ensure accuracy, but we cannot be responsible for errors that may occur.

Grade Classification	A	A¹	A²	A³	B	B¹
Craftsmen	1/10½	1/10	1/9½	1/9	1/8½	1/8
Labourers	1/5	1/4½	1/4½	1/4	1/3½	1/3½

Aberdeen	A	Dumfriesshire	A²	Inverness	*	Perthshire	A²
Ayrshire	A	Dundee	A	Inverurie	A¹	Peterhead	A¹
Banff	B	Dunoon	A	Kincardineshire	A²	Renfrewshire	A
Berwickshire	A²	East Fife	A	Kinross-shire	A	Rothesay	A
Bridge of Allan	A	East Lothian	A	Lanarkshire	A	Roxburghshire	A²
Broughty Ferry	A	Edinburgh	A	Midlothian	A	St. Andrews	A
Clackmannanshire	A	Fifeshire	A	Monifieth	A	Selkirkshire	A²
Doune	A	Forfarshire	A²	Moray and Nairn	B	Stewartry	A²
Dunblane	A	Glasgow	A	Newport	A	Stirlingshire	A
Dumbartonshire	A	Greenock	A	Peebleshire	A²	Stornoway	A
Dumfries	A¹	Hamilton	A	Perth	A	Tayport	A²
						West Lothian	A

* This town has its own rates: Masons, 1/8½; Carpenters, 1/8½; Slaters, 1/8½; Plumbers, 1/9; Plasterers, 1/9½; but 1/10 is paid owing to the scarcity at present; Painters, 1/8½ and Labourers, 1/4.

The information given in this table is copyright. Rates of wages in England and Wales are given on page 373.

NOT having recently tried

Manger's Improved Sugar Soap

The Scientific **Disinfecting** Paint Cleanser

FOR ITS LOWER COST IN:

★ 1. PREPARING WORK for REPAINTING.

★ 2. CLEANING PAINT.

★ 3. FINING DOWN where work is not crazed right through (saves burning off and repriming).

★ 4. Efficient cheap STRIPPING in strong solutions (DISTEMPER, VARNISH, FRENCH POLISH, VARNISHED PAPERS, etc.)

I/We will give a free sample (sent post free) a fair trial for Nos. (state which.)

Cut this out or write to MANGER'S SUGAR SOAP, Dept. B.2, Kingsland, London, E.8.

Name

Address

Usual Merchants

Address

THE SCOTTISH BUILDER

CARMICHAEL. — HOUSES. — Plans have been prepared for new houses, etc., the architect being Mr. Samuel McColl, County Housing Offices, Hamilton.

GLASGOW.—BUILDINGS.—Plans approved for additions to Seamen's Corporation Trust, Ltd., The Grange, Wimbledon, London, the architect being Mr. Magnus Duncan, 243, Eglinton-st.—Plans approved for new garage at Helen-st., for Mr. David Harvey (Fyfes Dairies), the architect being Mr. W. Whitelaw, 12, Golspit-st.—Alterations to be made for Messrs. Golberg, the architects being Messrs. Whyte and Nicol, Bath-st.—Mr. A. D. Hyslop, 114, St. Vincent-st., Glasgow, has had his plans approved for additions, etc., for MacBean and Co., Ltd.—Plans approved for additions at Scotstoun, for Finnieston Engineers Co., Ltd.

MOTHERWELL. — BUILDING. — Plans approved for new building at Wishaw, for James Warnock and Son, the architect being Mr. W. Brown, 402, Shields-rd., Motherwell.

NEW BUILDINGS IN LONDON

DAGENHAM.—BUILDING.—The T.C. has passed plans for Messrs. Union Cable Co., for building, etc.

EALING.—BUILDING.—Plans passed by T.C.: Messrs. East London Rubber Co. (builders, Messrs. P. Bilton, Ltd.), additions to factory in Aintree-rd.), and Mr. R. Rowe (architects, Messrs Hall-Jones and Partners, 51, The Mall, Ealing, W.5), repairs at 65, Broadway, W.13.

LEYTON.—FACTORY.—The T.C. has approved plans submitted by Messrs. Higgins and Thomerson, architects for factory blocks.

WALTHAMSTOW. — CANTEEN, ETC. — The T.C. has approved a proposal by Messrs. Holmes Bros., for a canteen at the rear of their premises.

CURRENT AND PROPOSED BUILDING WORK*

Bangor.—T.C. to invite tenders for external painting of 206 Council houses, four shops and the woodwork, etc., of buildings in Sillwen baths.

Batley.—H. Wormald (A.), County Architect, County Hall, Wakefield, to prepare specifications for renovations proposed at Girls' Grammar School and at Technical College, for West Riding E.C. Tenders to be invited.

Chesterfield.—T.C. propose mortuary near cemetery, at £2,060. Plans by W. S. Wilson, Boro' Sur.

Colne Valley.—U.D.C. propose communal feeding and kitchen centres at Marsden and Slaithwaite.

Conisborough. — Denaby and Cadeby branches of Yorkshire Miners' Assn. urging U.D.C. to establish communal feeding centres.

Coventry.—Plans submitted to Ministry of Food for conversion of Butts Pavilion for use as community feeding centre, with seating accommodation for 1,000 persons. Estimated cost £5,521. Plans by D. E. E. Gibson (A.), City Architect, 1a, Warwick-row.

Durham.—City Council included in estimates £1,500 for repairs to river wall at Framwellgate waterside.—County Licensing Committee confirmed granting of licences for new public-houses at Hebburn, for McEwan and Co.; Waldridge, for Vaux and Son; and Spennymoor, for J. R. Dobson.

Durham.—County E.C. to carry out repairs to electrical installation at Murton Colliery school and to heating installation at Dinsdale-pk. residential school.—C.C. to make alterations to County Mental Hospital, also alterations to Winterton Hospital and Shire Hall, Durham. Plans by W. J. Merrett, County S., Durham.

Gateshead.—T.C. to build greenhouse at Saltwell Cemetery, at £600. Plans by F. H. Patterson, Boro' Eng.

Hebburn. U.D.C. to set up and equip communal feeding centre at Quay school. Plans by J. Dibble, S.

Huyton-with-Roby.—U.D.C. propose communal feeding and kitchen centre. Plans by A. W. Thomas, Sur.

Jarrow.—J. S. Weir, Boro. Eng., to report on community kitchen on Simonside estate.

Leicester.—T.C. approved plans for brick building on Parks estate, for community hall and kitchen. Estimated cost £4,900 for building. Plans by J. L. Beckett, City Eng. and Sur.

Leyton.—T.C. approved repairs at Whipps Cross bathing pool.

Macclesfield.—T.C. propose extension of police garage in Police yard. M. Tetlow, B.A. (A.), Borough Architect, Pear Tree House, Jordangate.

Maghull.—Lancashire E.C. acquired premises for conversion for use as temporary junior school.

Mansfield.—T.C. propose municipal restaurant at Pleasley Hill library, reconstruction of Central Public library, and improvement of sanitary accommodation at Broomhill Infants' School.

Matlock.—U.D.C. approved additions to buildings, Darley Dale, A. Johnson and Sons.

Newcastle-under-Lyme.—T.C. propose adaptation of drill hall at Silverdale and The Chapel at Knutton for communal feeding and kitchen centres.

Northampton.—C.B. instructed Boro' Eng. to obtain amended tenders for reconditioning four cottages.

Oldham. — Health Committee propose cubicle block, at £4,000 and alterations to existing cubicle block, cost £2,500, at hospital.

Preston.—T.C. propose to establish eight communal feeding and cooking centres, each to accommodate 1,500 persons. Plans by J. E. Foster, Boro' Sur.

Prestwich.—T.C. propose communal feeding and kitchen centre, Bury New-road. Plans by Handel Kay, Boro' Sur.

Romford.—T.C. made application to M.T. for loans of £885 and £140 in connection with improvement of South-st.

Rotherham.—T.C. approved: additions to works, B. Bennett, Junr., Ltd.; additions to works, Rotherham Forge and Rolling Mills Co., Ltd.

Salford.—Health Committee are to seek approval of M.H. for day nursery at Old People's Homes, Pendleton, at £2,663.—T.C. propose to establish British Restaurant in four bays of covered market on Cross-la.—T.C. applied to M.H. for sanction to borrow £25,000 for repairs to war-damaged houses. Plans by W. A. Walker, City Eng.

Sheffield.—T.C. seeking sanction to borrow £200,000 for repairs to houses.—Housing Committee proposes to complete 239 houses in course of erection. Plans by City Architect.

South Shields.—T.C. to provide communal kitchens in John Clay-st. at £280 10s., Woodbine-st. at £270, and Hudson-st., Tyne Dock, at £300.—Subject to M.T., T.C. intends proceeding with reconstruction of Stanhope-rd. at £6,630 and Frederick-st. at £2,320.

Southport.—Liberal Association, London-st., acquired premises for adaptation for new headquarters.

Stourbridge.—Stourbridge and District A.T.C. acquired premises for conversion into headquarters. G. F. Webb (L.), 82, High-st., architect.

Stretford.—T.C. recommend £129 in respect of demolition of chimney at Empress-st.—P. Howard (A.), architect for repairs at Trafford Park baths and laundry, at £493.—Cruickshank and Seward, architects, for improvements at Old Trafford baths.—Plans passed: Store for Rubber Regenerating Co., Ltd.; office, store, etc., for T. and W. Wells; works extension for Parkinson and Cowan, Ltd.; factory, for Ford Motor Co., Ltd.

Wallsend.—Slipway and Engineering Co., Ltd., to build works canteen. Architects, Cackett, Burns Dick and MacKellar, Ellison-pl., Newcastle.

Walthamstow.—T.C. to make-up Sutherland-rd.—Boro' Eng. and Sur. to prepare plans for Home Guard accommodation.

Wenlock.—T.C. proposes communal feeding and cooking centres in various districts. Plans by F. Richards, Boro' Sur.

West Hartlepool.—Plans Committee approved proposal of J. W. Cameron and Co., Ltd., to build licensed premises in Serpentine-rd. Architects, J. G. Cowe and Son, Central-chambs., Chester-le-Street.

Widnes.—T.C. approved: Alterations to Albert Hotel, for Grennall, Whitley and Co., Ltd.

Woolwich.—B.C. approved: Wright and Renny, architects, 1 and 3, Powis-st., Woolwich, extension to garage at Eltham.

* See also List of Contracts Open.

Irish Builders' Registration.

At a meeting of the Council of the Federation of Builders, Contractors and Allied Employers of Ireland, observations were received from affiliated associations on the subject of the draft Bill for the registration of builders and contractors. It was decided that the observations received should be correlated and that a further draft of the Bill should be prepared for circulation to all associations.

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TENDERS

The Editor welcomes authentic information for this feature from architects, surveyors or contractors. Items should reach 4, Catherine-street, Aldwych, W.C.2, not later than Tuesday morning.

Tenders for A.R.P. work will be found under "A.R.P. Schemes."

* *Denotes accepted.*
† *Denotes provisionally accepted.*
‡ *Denotes recommended for acceptance.*
§ *Denotes accepted subject to modification.*
¶ *Denotes accepted by H.M. Government departments.*

Ampthill.—New bathrooms at 17 and 19, Woburn-st., for Beds C.C. S. C. Jury, County Architectural Dept., Bedford :—
W. T. Sharpe, Ltd., Ampthill ... £225 5
*T. Gambriel, Wilstead 179 10

Bethesda.—New intake, supplying and laying about 2,138 yds. of 5-in. and 6-in. asbestos-cement pipes on mountain, and other incidental work, for U.D.C. Henry Adams & Son, consulting engineers, 60, Queen Victoria-st., London, E.C.4. :—
Hadsphaltic Construction Co., Ltd., Wellington ... £8,021 19 8
Davis Bros., Barmouth ... 4,177 3 4
West Heath (Contractors), Ltd., Stafford 3,632 2 3
*S. Foster Deacon, Plymouth 3,487 11 11

Chadderton.—Taking up of tramway track and taking up and relaying existing stone setts to form a ballast foundation and resurfacing of Middleton-rd. with approx. 4,400 super. yds. of bituminous macadam, for U.D.C. F. W. Pexton, Eng. and Sur. : *T. Coates (1927), Ltd., Victoria-bldgs., Silver-st., Bury.

Glasgow.—Works for T.C.: Concrete floors for houses at Penilee housing site. W. MacNab, Architect, Housing: *Springbank Quarry Co., Ltd., Airdrie, £4,340; additions to Water Dept. offices, *Adrema, Ltd., Glasgow, £1,660.

Greenock.—Works for T.C.: Electrical fittings at housing site. David Henderson, Architect. Municipal Bldgs.: *J. Stuart Denholm, Glasgow. Straightening work at Rankine Park Burn. R. Miller, Engineer and Surveyor, Municipal Bldgs. : *R. Johnstone, Greenock, £534 1s.

¶London (War Dept.).—Works contracts placed for week ended March 29 :—
Yorkshire: Building and miscellaneous work, Wright & Kellett, Ltd., Finchdale-ter., Chester-le-Street, Co. Durham; and Dunhill Bros., 387, York-rd., Leeds, 9.
Yorkshire: Hutting (erection), J. H. Gilbert, 15, Cemetery-rd., Doncaster.
Gloucestershire: Hutting (erection), Gee, Walker & Slater, Ltd., 57, Winchcombe-st., Cheltenham; Y. J. Lovell & Son, Ltd., Marsham-la., Gerrards Cross, Bucks (2 contracts); A. C. Billings & Sons, Ltd., Winchcombe-st., Cheltenham.
Lancashire: Miscellaneous work, Pius A. Baines & Son, Ltd., Paley-rd., Marsh-la., Preston.
Cumberland: Hutting (erection) (3 contracts), Thos. Armstrong, Ltd., Saw Mills, Cockermouth.
Westmorland: Hutting (erection), J. Miller & Sons, 15, London-rd., Carlisle.
Glamorganshire: Constructional work, C. Bryant & Sons, 55/65, Whitmore-rd., Small Heath, Birmingham.
Brecknockshire: Miscellaneous work, T. F. Howells, Ltd., 83, Bartlet-st., Caerphilly, Glam.
Brecknockshire: Hutting (erection), T. F. Howells, Ltd., 83, Bartlet-st., Caerphilly.
Roxburghshire: Hutting (erection), Colin MacAndrew & Partners, Ltd., 11, West End-pl., Edinburgh.
Co. Antrim: Hutting (erection), Donegall Building Works, 396, Donegall-rd., Belfast.
Co. Tyrone: Miscellaneous work, Benson Bros., Killymoon, Cookstown, Co. Tyrone.
Hampshire: Hutting (erection) and building work, Johnson & Sons (Liphook), Ltd., Longmoor-rd., Liphook; and Wm. F. Rees, Ltd., 39, Victoria-st., London, S.W.1.
Inverness-shire: Miscellaneous works, Norman Smart & Sons, 90/101, Kenneth-st., Inverness.
North of Thames Area: Miscellaneous work, Walker (Tooting), Ltd., Cadmus House, Beddington-la., Croydon.

Devon: Miscellaneous work, W. J. Squire, "Weirholme," Landkey-rd., Barnstaple (2 contracts); W. Beer & Son, Rocklea, Bideford, Devon.

Londonderry: Miscellaneous work, J. McBride, Duncreggan-rd., Londonderry.

Cornwall: Miscellaneous work, W. H. Trounson & Son, New-st., Penzance; Turner & Ellery, Mount Folly, Bodmin; and Coulls & Gribble, Ltd., Count House Yard, Carn Brae, Redruth (3 contracts).

Suffolk: Hutting (erection), George A. Kenney & Son, Ltd., Army-wks., Burrell-rd., Ipswich.

Matlock.—Structural alterations to fire station, for U.D.C. J. Turner, Sur.: *B. B. Beddington, School-st., Matlock, £132 12s. 6d.

Newcastle-on-Tyne.—Repairs to houses, for City Council: Slating and tiling, *J. Hewitson, Leazes Park-rd., Newcastle-on-Tyne, £500; electrical repairs, *B. Berrie, 34, Normanton-terr., Newcastle-on-Tyne, £175.

Newcastle-upon-Tyne.—Works for Angus & Co.: *Stephen Buy, 224, Westgate-rd., Newcastle.

Newcastle-under-Lyme.—Works for T.C.: Demolition of two warehouses in Penkhull-st.: *J. Deakin & Son, London-rd., Newcastle-under-Lyme, £10; material for repairs to retort ironwork of vertical retorts at Gasworks: *Woodall-Duckham Vertical Retort and Oven Construction Co. (1920), Ltd., "Uplands," Epsom-rd., Guildford, £296.

Romford.—Drainage, etc., at Romford cemetery, for T.C.: *W. H. Gaze & Sons, Ltd., £1,225 11s. 11d.

Stretford.—Works for T.C.: Demolition of sanitary depot chimney: *A. Wilson; repairs at town hall (Bradshaw Gass & Hope, architects, Bolton), *E. Marshall & Son.

Wallsend.—Four communal feeding centres: *J. H. James, Wallsend (2); and *T. Clemente & Sons, Selborne-gdns., Newcastle (2).

York.—Demolition of Exhibition buildings, for City Council: *I. Varley, Halifax, £917.

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OFFICIAL NOTIFICATIONS

Timber Control Appointment.

The Ministry of Supply announces that in agreement with the Timber Controller, the Director of Home Grown Timber Production and Mr. Colin Darby it has been arranged that Mr. Colin Darby should relinquish his appointment as Senior Deputy Director of the Home Grown Timber Production Department and should in future act as liaison officer between the Timber Control and the Home Grown Timber Production Department as well as Assistant Controller in the Timber Control.

Road Haulage Rates.

The Minister of Transport, Lt.-Colonel the Rt. Hon. J. T. C. Moore-Brabazon, M.C., M.P., has appointed a Road Haulage (Rates) Joint Consultative Committee to advise the Minister of Transport on any questions that he may refer to the Committee regarding road haulage rates. Sir Arthur Eborall, C.B.E., Controller of Transport Rates and Charges of the Ministry of Transport, is chairman, and in addition representatives of the Ministries of Food, Supply and Air, the War Office, and outside interests have been appointed. Mr. R. Eyres will act as secretary.

LONDON MASTER SLATERS

Following are points from the annual report of the London Association of Master Slaters and Tilers:—

BAD WORKMANSHIP ON EMERGENCY REPAIR JOBS.—The Association has been very concerned at the bad workmanship shown in many recent repairs to roofs damaged by enemy action. Owing to the shortage of experienced craftsmen, unskilled labour is being used, with the consequent natural result that the public will be involved in additional expense in putting right the "faulty repairs." It has been urged that whilst the shortage of skilled men obtains, arrangements should at least be made for proper supervision by experienced roofing contractors.

DIAGONAL SLATING.—The Association was approached to ascertain if any members had carried out jobs using any diagonal method of slating with natural slates. Accordingly, the members of the committee were invited to give their observations. They expressed the view that, with a certain method, owing to the weakness of the fixing, slates would be easily disturbed by strong winds.

INSPECTION OF BOOKS BY GOVERNMENT AUDITORS.—On the termination of a Government asbestos job, a member was subjected to an inspection of his books by a Government auditor, who gave him to understand that in future any firm found to be making more than 15 per cent. gross profit on a Government job would be requested to refund the surplus to the Government. The computation was made up of 5 per cent. for overheads and 10 per cent. profit.

The opinion is held that this system is most inequitable, since there are some jobs upon which members would secure, say, 15 per cent. profit and on others 5 per cent. What had to be borne in mind was the net profit made by each firm at the end of the financial year. It must also be remembered that so far as asbestos was concerned, fixers are working on a price arranged by the asbestos manufacturers.

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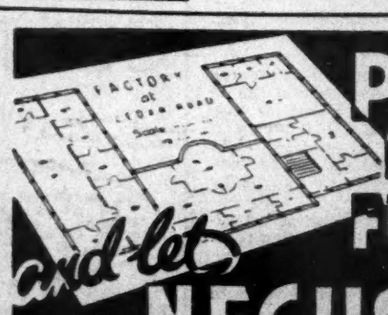

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